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S. C. SARKAR

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22nd year of issue

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FOREWORD

This year's Hindustan Year-Book exceeds the last year's book by 150 pages. This has enabled us to make the book more up-to-date and informative, in addition to needed revisions and many improvements.

The editor acknowledges with thanks the many letters, whether of helpful comment or criticism that attest the usefulness of the Hindustan Year-Book and invites suggestions for improvements of its services to readers.

S. C. Sarkar,
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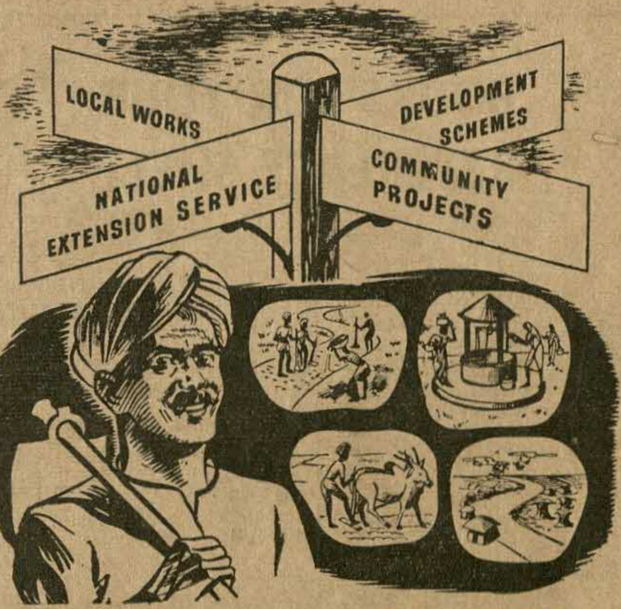

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INDIA AT A GLANCE

AREA

India covers an area of 1,269,640 including Jammu and Kashmir and Andaman and Nicobar Islands. It has a land frontier 8,200 miles long and a coast line of 3,500 miles. She is roughly two-thirds the size of Europe excluding Russia or thirteen times that of Great Britain. India is the seventh largest country in the world. It extends about 2,000 miles from north to south and about 1,700 miles from east to west. India lies north of the equator between the latitudes 8° and 37° north and longitudes 66° 20′ to 97° east.

PHYSICAL DIVISION

India can be divided into *three distinct physical divisions or three regions.*

1. The Himalayan region.
2. The Indo-Gangetic plains.
3. The Deccan or Plateau of the south.

The *Himalayan Region* stretches from western limits of Kashmir in the west to Burma in the east, a distance of 1,700 miles with an average width of nearly 200 miles, forming a natural barrier to the north. The Himalayas with Pamirs, Hindukush, Sulaiman etc., form a mountain wall shutting off Indian sub-continent from the rest of Asia. The Himalayan region acts as a natural protective wall and provides rain water for the plains by arresting the moisture-bearing clouds of south-west monsoon. During winter, it obstructs cold winds of Central Asia from coming to Indian sub-continent. The region contains rich animal and forest resources.

The Indo-Gangetic plain lies between the Plateau of the south and the Himalayas extending for about 1,500 miles. It is watered by the Ganges and its tributaries—Jamuna, Gomti, Gagra and Gandak and also by Brahmaputra. A part of the East Punjab is watered by Ravi, Beas and Sutlej. The plain covers an area of 300,000 sq. miles and economically the most developed and fertile region. As the name indicates, the plain has two great river systems, the Indus and its tributaries and the Ganges and its tributaries. A third great river, the Brahmaputra, cuts through the Himalayas near their eastern end and joins the Ganges to form a great delta. The land drained by those rivers is alluvial and forms the most fertile region in India.

The Deccan—From the river-plains on the north and from the coast-plains on the east and west of Peninsular India, there rises a great three-sided plateau called the Deccan. It begins at Vindhya mountains in the north and other two sides are known as Western Ghats and Eastern Ghats. This region is quite unlike the low-lying Indo-Gangetic plain. It is not smooth and flat but a table-land raised from 1,500 feet to 4,000 feet above sea level and broken up into many river valleys which run seawards among ranges of hills. The plateau is traversed by the rivers Narbada and Tapti which fall into the Arabian Sea and the Mahanadi, Godavari, Krishna and Cauvery which drain into Bay of Bengal.

CLIMATE AND RAINFALL

Spreading as she does from the subtropics in the south to the freezing north, India has a varied climate. The weather changes seasonally and from region to region.

As the greater part of the country lies within the Tropics, the climate is tropical; high temperatures being the rule in the low-lands, lower temperatures in the high-lands. The rainfall is determined to a great extent by the monsoon. So dependent is India on this annual rainfall that variations from year to year mean prosperity or disaster for millions. There are two such currents, the *South-West monsoon,* and *North-East monsoon.* The *South-West monsoon,* as it is called, strikes India about the middle of June. S. W. monsoon gives 90 per cent. of the total rainfall of India and effects the growth of nearly all her food-crops. This monsoon reaches the country in two currents—Arabian sea current and the Bay of Bengal current. The former gives rain to Bombay, the Punjab, and a part of the Madhya Pradesh and the latter to the rest of India and to Burma.

The other current known as *North-East monsoon* is really South-West monsoon in retreat and flows from the land towards the sea. The north-east monsoon brings rain only to Travancore-Cochin and parts of Madras.

The different parts of the country receive rainfall in different degrees. Cherrapunji in Assam gets an annual rainfall of about 465 inches, whereas some parts of Rajasthan and Eastern Punjab get annual rainfall less than 7 inches. Ninety per cent. of the rainfalls during three months from July to September, accounts for only 10 p.c.

We can divide the country into four zones according to rainfall : (1) *Wet zone,* where minimum rainfall is 100 inches. This includes West Bengal, Assam and Western coast stripes. (2) *Intermediate zone* (zone of moderate rainfall) : it includes portions of Central India, Himalayas to Godavari river, east-coast of the peninsula and eastern side of the Western Ghat and up to Baroda, where rainfall is between 40 inches and 80 inches. (3) *Dry zone,* where rainfall is less than 40 inches. (4) *Desert zone,* where rainfall is less than 20 inches, *i.e.,* Rajasthan and East Punjab.

According to the climatic condition of India, we can classify the season as follows—(1) *cold weather* from October to February (2) *hot weather* from March to June (3) *rainy weather* from June to October.

SOIL OF INDIA

Indian soil may be mainly classified under four different heads namely, (1) *alluvial soil,* (2) *black soil,* (3) *red soil* and (4) *laterite soil.*

The alluvial soil is formed by the silts brought by the rivers every year and deposited on their banks. It is very fertile and covers greater part of the northern India between the foot of the Himalayas and the northern slopes of the Vindhyas and extends in a narrow fringe round the coastline of the Peninsula. Territorially they occupy Punjab, Uttar-Pradesh, Bihar, West Bengal parts of Assam and Orissa and also in the coastal regions of Southern India. The whole of the Indo-Gangetic plain is comprised in this area.

Red soils cover the whole of Madras, Mysore and south-east Bombay, east of Hyderabad and Madhya Pradesh to Orissa and Chota Nagpur. Northwards the red soil extends into greater part of Santhal Parganas and the Birbhum district of West Bengal, the Mirzapur, Jhansi and Hamirpur District of the Uttar Pradesh, the Baghelkhand States of Central India, the Aravalis and the eastern half of Rajasthan.

Black soil or black cotton soil is formed by the lava of volcanic eruptions and is very suitable for cotton cultivation. The black soil covers greater part of Bombay and Saurashtra, western part of M. P., Madhya Bharat and Hyderabad and some parts of Madras State. Black cotton soil is exceedingly compact and tenacious and sticky when wet. The water holding capacity of this soil is good. Cotton, jawar, wheat, linseed and gram are cultivated in these areas and the soil is rich in iron and aluminium but very poor in organic matter and other plant nutrients. *Laterite soil* is derived by the atmospheric weathering of several types of rocks under monsoon conditions of alternating dry and wet periods. This soil is found on the summits of the hills of the Deccan, Madhya Bharat, Madhya Pradesh and of the Rajmahal and Eastern Ghats and certain parts of Orissa, Bombay, Malabar and Assam.

LANGUAGES

The Constitution of India stipulates that official language of India should be Hindi within in Devanagri script and that the international form of the Indian numerals should be used officially. For 15 years, however English should continue to be used for official purposes. Following 14 languages are recognized by the Constitution—Assamese, Bengali, Gujarati, Hindi, Kannada, Kashmiri, Malayalam, Marhathi, Oriya, Punjabi, Sanskrit, Tamil, Telugu, and Urdu.

HIMALAYAN FRONTIER

The Himalayan range is an effective barrier against invasion or interference from the north. There are few usable passes leading from the plains, most of them serve as gateways of trade. In the Central Arc of the Himalayas there are some famous passes, but unfortunately they are very high and difficult to climb and snowbound for major part of the year. These are *Jelep La* north of Gangtok in Sikkim leading to Leh and *Shipki pass* from Simla to Manasarovar region.

The present north-west frontier of India is no longer the old traditional frontier which admitted all foreign invaders of India. After partition of India, the boundary of the new north-west frontier of India is about 200 miles long starting from the southern boundary of Kashmir up to the north-eastern limit of the Bahawalpur State.

India is separated from Burma by Patkai, Naga and Lushai Hills and by Arakan Yoma, so that overland route with India is scarcely resorted to though there are four main gaps—Tuzu Gap, Manipur Route, An Pass, and Taungup Pass. There are Zozila Pass and Karakoram Pass leading to Tibet from Srinagar.

COAST LINE

Coast line of India lacks in indentations and although about 2,500 miles in length, it has only four openings of importance into land, such as Runn of Cutch and Gulf of Cambay on west, the Gulf of Mannar between India and Ceylon and the head to the Bay of Bengal. The coasts are singularly free from islands and the sea round the coast of India is very shallow and the shores are usually flat and sandy. The West coast is rocky with mountains close to the sea. East coast is less rocky but the sea here is shallow, so that large ships cannot approach the coast.

RIVER SYSTEMS

(1) *Rivers of Northern India*—They all rise in the mountain wall or beyond it. The rivers are fed with waters from the gradual melting of snow. They do not depend entirely for their waters on the monsoon rains.

The three greater river systems of Northern India are :—(*a*) *Indus* river with its five tributaries, *i.e.*, *Jhelum*, *the Chenub*, *Ravi*, *the Beas* and *the Sutlej* (*b*) *Ganga* river with a course of fifteen hundred miles, drains Himalaya's southern slopes and with its tributaries, *the Jamuna*, *the Gogra*, *the Gondak*, *the Chambal* and *the Sone*, and enters Bay of Bengal through extensive deltas with multitude of channels ; (*c*) *Brahmaputra* flows down through Tibet, Assam and Eastern Bengal and discharges its floods after a course of sixteen hundred and eighty miles into Bay of Bengal.

(2) *Rivers of Peninsular India*—They are quite different from the rivers of the Northern India. They rise in the hills of the plateau and they are fed only by monsoon rains. The rivers rise near Western Ghats, and flow towards Bay of Bengal. The most important are the *Mahanadi*, *Godavari*, *Kistna* and *Cavery*. In the north of the plateau two important rivers, *Narbada* and *Tapti* flow westwards.

PORTS

India has very few natural harbours, because it is broken by very few inlets of the sea, the sea round the coast is very shallow and the shores are usually flat and sandy. Except Bombay, Okha and Cochin, all other ports in Western India coast are virtually inaccessible during the monsoon. The eastern coast of India is surfbound and has no natural harbour. Calcutta is about 90 miles from the sea and the formation of sand banks in the Hooghly has made Calcutta a dangerous port.

The principal ports of India are Bedi Bunder, Okha, Porbandar, Surat, Bombay, Marmugao, Mangolore, Calicut, Cochin, Alleppey, Quilon, Tuticorin, Dhanushkodi, Negapatam, Karikal, Cuddalore, Pondicherry, Madras, Masulipatam, Cocanada Vishakapatnam, Calcutta. Of these Karikal and Pondicherry belong to France and Marmugao belongs to Portugal. Bombay, Visakhapatnam, Madras, Cochin and Calcutta are termed 'major ports' of India.

POPULATION

The total population of India (excluding Jammu & Kashmir and Part B Tribal areas of Assam) is 56,289,485 which is an increase of 12·5 p.c. over the corresponding figure of 1941. India has 946 females for every 1,000 males. The number of males exceeds that of females in all the States except Orissa, Manipur, Madras, Travancore-Cochin and Kutch. The males are 183,305,654 and females are 173,523,831. Except for the Punjab and Andaman and Nicobar Islands which registered a decline in the mean decennial rate by 0·5 and 8·6 respectively, all other States showed an increase, the highest being at Delhi (62·1) followed by Coorg (30·5). As regards population, Uttar Pradesh has got the highest number with a total of 65 millions. Next comes Madras with a population of 57 millions, Bihar occupying third position with 40 millions.

The average density of population in India is 312 per sq. mile.

Out of the total population of India only 17·3 percent live in cities and towns, while the remaining 82·7 per cent in villages.

There are 75 cities in India each with a population of one lakh and over.

As regards economic classification, 70 per cent of the people depend on agriculture and 30 per cent on non-agricultural professions.

Out of 100 Indians 47 are peasant proprietors, 9 mainly tenants, 13 landless labourers, 1 a landlord, 10 engaged in industries, 6 in commerce, 2 in transport and 12 in services and miscellaneous professions.

As regards density of States, Delhi has highest density with 3,017 per sq. mile, while Travancore-Cochin is second with a density of 1,015 per sq. mile ; After these two, comes West Bengal with a density of 806 per sq. mile.

The India's total population of 361·25 millions (including Kashmir and tribal areas of Assam) is the second highest in the world, China leading with a population of 463·50 millions. India's population constitutes 15·1 per cent of the total world population as against Ghina's 19·4 per cent.

INDIAN RACES

During the British period the first official enumeration of the people of India was made by Sir Herbert Risley which was an official pronouncement accepted very largely both in India and outside India, though it is now regarded as arbitrary classification based on insufficient data and immature science. Indian races were divided into seven broad groups, such as *Mongoloid, Indo-Aryan, Dravidian, Mongolo-Dravidian, Aryo-Dravidian, Scytho-Dravidian* and *Turko-Iranian.*

Next classification was made by Dr. J. H. Hutton in 1933 based on race-cum-language and-culture sequence. According to this theory all people came to India from outside such as—

(1) *Negritos* from Africa, the oldest people to have come to India now surviving in the Andaman islands and in Malaya. Traces of them seem to occur among the Nagas in Assam and in certain tribes in South India.

(2) *Proto-Australoids*—who came from the East Mediterranean area.

(3) *Early Mediterranians*—who brought earlier forms of the Austric speech.

(4) *Civilised or Advanced Mediterranean*—who became Dravidians in India.

(5) *Armenoids*—a specialised offshoot from the standard Alpine stock probably came with the civilised Mediterraneans (Dravidians) and spoke their language.

(6) *Alpines*—found in Gujarat and Bengal ; earlier than Vedic Aryans but probably speaking Aryan dialects.

(7) *Vedic Aryans or Nordics*—who brought the Vedic Aryan (Sanskrit) speech.

(8) *Mongoloids*—Not important for the greater part of India as they touched only the northern and eastern fringes.

The most recent and authoritative classification has been made by Dr. B. S. Guha, Director of Anthropology who divides the people of India into six main races with nine sub-types.

(1) *Negrito*—is now almost extinct in India, a small group is still surviving in Andamans and its traces have been found among Kadars and Palayans of Cochin and Travancore Hills, Irurals of the Wynad, the Angami Nagas of Assam and some of the Rajmahal Hill tribes of Bihar.

(2) *Proto Austroloids*—seem to have come from the West. They survive in a good many aboriginal peoples of the present day India, although more or less mingled with other people. A branch of the Proto Austroloids passed on to Australia in recent times. Throughout the greater part of India, the Proto-Austroloid peoples still live as the lower castes or sections of the Indian people.

(3) *The Magoloid Group*—is divided into (1) Palaeo-Mongoloids consisting of long headed and broad headed types. They form a dominant element in the tribes in Assam and the Indo-Burmese frontier and among the less primitive types in Burma and in Chittagong. (2) Tibeto-Mongoloids are found in Sikkim and Bhutan.

(4) *Mediterranean Group* consisting of (*a*) Palaeo-Mediterranean, medium statured, dark skinned and slight built, found in Kannada, Tamil and Malayalam tracts. (*b*) Mediterranean, true European type found in the Punjab, Upper Gangetic Valley and is supposed to represent civilised pre-Aryan Dravidian people of

Northern India, who contributed largely to the evolution of Hindu people and culture of North India. (*c*) Oriental Type, sometime called Semitic or Jewish, found in the Punjab, in Sind, in Rajputana, in Western U.P. and in some other parts of India.

(5) *Western Brachycephals* consisting of (*a*) Alpinoid, (*b*) Dinarik and (*c*) Armenoid. They seem to have evolved in the Central Asian mountain regions and both Alpine and Dinaric varieties appear to have spread over the greater part of India, *i.e.*, Bengal, Orissa, Kathiawar, Kannada and Tamil countries, Gujarat, West coast of India excepting Malabar. The Parsis of Bombay are allied to Armenoids.

(6) *Nordics* are the Aryan speaking group of India who are responsible for India's Hindu civilisation and seem to have come from the Eurasian steppe lands and entered India during the second half of the second Millennium B.C. The Nordic elements are strong in North-West Frontier of India, in the south of Hindu-Kush Range. Nordic elements are present in mixed form in Punjab, Rajputana, Upper Ganges Valley. They are also found among higher castes and groups and also Nordic type predominates in certain sections in India.

Lastly the author of this classification Dr. B. S. Guha has however stated, "It must be clearly understood that no rigid separation is possible as there is considerable over-lapping of types."

MINERALS OF INDIA

The most important mining area of India is Chota Nagpur plateau comprising the region of South Bihar, South West Bengal and North Orissa. Most of the country's coal, iron, mica and copper come from this region. India's coal mines are centred mainly in the Raniganj and Jharia fields of West Bengal and Bihar. Some mines are found in Hyderabad, M.P. and Assam. Raniganj and Jharia account for 70 p.c. and more than 80 p.c. of the total coal raising. The total reserves of coal in India are estimated to be 6,500 million tons, but reserves of good quality coal amount to 5,000 million tons. In India iron ore is found in Singhbhum, Keonjhar and Mayurbhanj in Orissa, Madhya Pradesh and Mysore. Indian iron ore is of a very high quality. The average annual iron ore production is about 3 million tons. Mica is found in Hazaribagh (Bihar), Ajmer, Travancore and Mysore. India is the leading producer of mica and accounts for more than 75 p.c. of the world's output. Salt is obtained by the evaporation from Sambhar Lake in Rajasthan and ocean water in Bombay and Madras. Ilmenite and monazite, minerals of strategic importance are found in the sands along the Travancore coast. Magnesite is worked in the Chalk Hills of Madras, gold at Kolar gold fields in Mysore. Besides bauxite, chromite, steatite, gypsum, building stone, fire clay, asbestos, corundum and Fullers earth also occur in the country in varying degrees. Moreover her supplies of manganese, ilmenite, morazite, iron and itanium ores are among the largest in the world.

AGRICULTURE

India is a land of peasants, living dangerously near the margin of subsistence. The rural population is 87 per cent. of the total population, out of which 70 per cent. is engaged in agriculture. In India no homogeneous agricultural system can be adopted due to regional peculiarities. The cropping and agricultural practices vary to such an extraordinary degree that no general principles can be adopted. The output per acre in India compares unfavourably with any other country. India produces a variety of food and cash crops. The main food crops grown in India are rice, wheat, gram and jawar-bajra which account for about 80 per cent. of her total production of food grains.

Rice is grown in the Ganges Valley, some Districts of Punjab, Uttar Pradesh, Bihar, West Bengal, Assam, Western Ghats and the coastal belts of Orissa and Madras. Wheat is grown in Punjab, Pepsu, Uttar Pradesh and Madhya Pradesh, sugarcane grows in the Uttar Pradesh, Bihar, Madras, Mysore, Orissa, Hyderabad and Punjab. Oil seeds are grown in Madras, cotton in Punjab and in Deccan plateau. Tea is mainly grown in West Bengal, Assam and Nilgiris. Jute is mainly grown in West Bengal. Coconuts with coir and copra and cashew-nuts are plentiful in Malabor.

The Indian agriculture furnishes means of subsistence of one-seventh of the human race. It leads the world in jute, lac, tea, groundnut, cane sugar. Her position as regards rice, linseed, millet, is almost supreme in the world. The chief agricultural products of India are—rice, wheat, millets, pulses, gram, cotton, sugarcane, indigo, groundnut, linseed, castor, sesmum and oilseeds, jute, tobacco, tea and coffee.

The agriculture in India is a seasonal industry. There are two principal cropping seasons—*kharif*, the summer rain cultivation and *rabi*, the winter rain cultivation. *Kharif*, crops are sown with the outbreak of monsoon and harvested in September or October.

ANIMALS

Indian climatic conditions have naturally developed a great variety of animal life and the number of animal species found in India is much greater than that in Europe.

In India, animals are chiefly seen in the valleys of the Himalayas (*i.e.*, *Terai Forests*) extending from Kashmir to the Brahmaputra valley, on the Eastern and Western Ghats and in the jungles of Madhya Pradesh and Central India. There is a big game reserve forest at Khijiranga in Assam which preserves Indian rhinoceros.

(1) *Wild Animals—lion* is almost extinct and is now preserved in Gir forest of Kathiawar. *Tigers* are found all over India. *Leopards* (hunting leopards), *Panthers*, *Cheetahs* are common in the hills and plains. *Elephants* are found in the lower Himalayan valley, the Brahmaputra valley and forests of Nilgiri hills. *Bears* are available on the hills everywhere. *Deer* and *antelopes* are commonly seen in the plains.

Yaks are only seen in higher Himalayas. *Rhicnoeros* live in the swamps of Assam, North Bengal, Nepal. *Monkeys, Porcupines, Hares, wild Hogs* are to be seen everywhere.

(2) *Domestic Animals—goats, sheep, horses, ponies, asses, mules, bullocks, buffaloes* are available here and there. *Camels* are seen in the desert districts or Rajasthan, and East Punjab.

(3) *Birds*—Vultures, kites, hawks, wild ducks, wild geese, patridges pigeons, parrots, cranes, peacocks, snipes and sand grouse are available everywhere. Birds in India, as in most hot countries, are more famous for their plumage than for their song.

(4) *Reptiles*—Crocodiles are seen everywhere. The deadly snakes of India are *Cobras, Russel's Vipers, Keraits, Hamadryeds.*

(5) *Fish*—Most numerous fish are of carp family. The finest fish from angler's point is *Masher* found in all streams. The richest and tasty fish of India is *hilsa.* Fishing waters, river and sea, of Bengal and Madras are among the most extensive in the world.

CATTLE

India is one of the largest livestock countries in the world, which comprise about a seventh of the world's livestock population excluding U.S.S.R. Both per head of human population and per acre of cultivated land, the number of livestock in India exceeds those in most other countries. The most important cattle-rearing region is the north-west. It is a belt extending from Kathiawar through Rajasthan and Punjab to Kashmir.

Among the best cows in India are Sahiwal (Punjab) and Gir (Saurashtra). The important breeds of bullocks are Hissar and Hansi (Punjab), Nellore (Madras), Amrit Mahal (Mysore), Kankrej (Gujrat), Kangayam (Madras), Kherigarh (U.P.), Dangi and Nimar (Bombay) and Harina (Punjab).

FORESTS

Forests of India covers about 13·10 per cent of the total land area of the country. The total area of forests in India has been estimated at 160,104 sq. miles. A tropical country should have at least a third (33 p.c.) of its area under forests. The forest areas are also not well-distributed in some of the States, specially in the Indo-Gangetic plain when area has fallen to the dangerously low feature of 11 p.c. in Punjab, 16 in U.P., and 14 in Bihar.

India has been divided into three botanical areas and six provinces for the proper study of vegetation of India. The three botanical areas are (a) *Himalayan*—represents a rich, tropical temperate and alpine flora with forests of conifers, oaks, rhododendons and a profusion of orchids (b) *Eastern*—consisting of a few conifers, many oaks and palms with a greater preponderance of orchids and (c) *Western* which has only one conifer, few palms and very small orchids without any oak.

These three areas are divided into six botanical provinces based on their climate and physical characters, namely (1) Eastern Himalaya (2) Western Himalaya (3) Indus plain (4) Gangetic plain including Sunderbans (5) Malabar (6) Deccan—each with its peculiar flora.

The forest vegetation of India is divided into five types according to the variation in climate, altitude and habitat, such as—(1) *Evergreen* (2) *Deciduous* (3) *Dry* (4) *Hill* (5) *Tidal or Littoral.*

The forests in India supply valuable timber, firewood, essential oils, resin, turpentine, lac, dyeing material, myrobalans, sources of paper pulp and other materials of commerce and industry. The chief forest products of India are—teak, sal, deodar, chir, sheesham, many species of bamboo, leaves, fruits, fibres, grass, gums, resin, barks, etc.

STATES

The States of the Union is divided into three classes, listed respectively in Parts A, B, C of the First Schedule annexed to the Constitution. *Part A States* are Assam, Andhra, Bihar, Bombay, Madhya Pradesh, Madras, Orissa, Punjab, Uttar Pradesh and West Bengal. *Part B.* States are—Hyderabad, Jammu & Kashmir, Madhya Bharat, Mysore, Patiala and East Punjab States, Rajasthan, Saurashtra, Travancore Cochin. *Part C States* are—Ajmer, Bhopal, Bilaspur, Coorg, Delhi, Vindhya Pradesh, Himachal Pradesh, Kutch, Manipur, Tripura. Under the *Part D territories* there is only Andaman and Nicobar Islands

FLAG

National Flag is horizontal tricolour with bands of deep saffron, white and dark green in equal proportions. On the centre of the white band appears an Asoka Chakra (wheel) which is navy blue.

INDIAN FACTS IN A NUTSHELL

POPULATION

Every seventh man in the world is an Indian.

* * * * *

India's total population of 361·25 (including Kashmir and Tribal areas of Assam) according to 1951 census is the second highest in the world, China leading with a population of 463·50 million.

* * * * *

The density of population per sq. m. in Indian Union 312 according to 1951 census.

* * * * *

India's population constitutes 15·1 per cent of the total population of the world population against China's 19·4 per cent.

* * * * *

The increase in population of India in 1951 over 1941 is 12·5 per cent.

* * * * *

In respect of population of States, Uttar Pradesh has got the highest number with a total of 63·25 millions. Next comes Madras with a population of 57 millions.

* * * * *

In respect of area M.P. is the largest State with an area of 130·32 thousand sq. miles.

* * * * *

Total land area of India covered by 1951 census is 1,269, 640 sq. miles.

* * * * *

India's 75 cities have a population of a lakh or over. Uttar Pradesh has the largest number of cities—16.

* * * * *

About 83 per cent of the Population reside in rural areas.

AGRICULTURE

India is mainly an agricultural country. It provides livelihood to 70 per cent of the people and accounts for nearly 48 per cent of the national income.

* * * * *

India is one of world's leading producers of commercial crops and they form the bulk of country's export trade.

* * * * *

India is the world's largest producer of oilseeds and tea and second largest grower of tobacco.

* * * * *

India is one of the most fertile lands in the world. But the average yield of every crop per acre is not only the lowest in the world but the figures are tragic. The average rice yield per acre, for example, of India, the U.S.A. Japan, Egypt and Italy are respectively about 731 lbs., 1,480 lbs., 2,307 lbs. and 3,000 lbs.

* * * * *

Indian forests cover an area of 160,104 sq. miles *i.e.*, about 13·10 per cent of the land surface of the country.

* * * * *

India has now the largest irrigation works and the longest mileage of canals in the world.

* * * * *

India has more than a third of world's total cattle, *i.e.*, about 255 millions. But India's cattle are worst of the lot, and they are fit only, as they do, to produce for India the largest amount of cattle hides. Besides low fertility, the major defect of Indian cattle is that an Indian cow on the average yields a little bit over 2 lbs., of milk a day compared to Holland's 20·5 lbs., England's 15 lbs. and New Zealand's 14 lbs.

* * * * *

The chief crops of India are rice, wheat, sugarcane, tea, cotton, jute, linseed, groundnut, coffee and rubber.

* * * * *

India today is one of the largest producers of sugar, 80% of which is produced in the two States of U.P. and Bihar. But the per capita consumption of sugar in India is the lowest in the world.

* * * * *

India enjoys virtual monopoly of lac production in the world and leads the world in the production of groundnut and tea.

India is the second largest producer of rice, jute tobacco and cotton.

MINERALS

India is the main source of the world's supply ilmenite, manganese, monazite, zicon and mica.

* * * * *

India is one of the world's leading producers of high grade manganese ore.

* * * * *

India is the largest producer of mica, contributing about 70 per cent of the total output. Bihar supplies about 80 per cent of India's total production.

* * * * *

Indian iron ore has the highest metal content (about 55 to 70 per cent) which makes the production cost of pig iron the lowest in the world.

* * * * *

Next only to the U.S.A. and France, India has the largest reserves or iron ore of which she is the largest producer in the Commonwealth of Nations, and stands ninth in the world.

* * * * *

The annual consumption of salt in India is estimated at 530 lakh tons which means that per capita consumption of salt is one of the lowest in the world. India has however become self-sufficient in salt within recent years.

* * * * *

India produces annually about 3,50,000 ounces of gold value at about Rs. 3 crores.

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India stands 12th among the petroleum producing countries of the world, and the average production per year is about 0·62¾ of the world output.

TRADE & INDUSTRIES

India is one of the largest industrial countries of the world ; but industry gives occupation to only about 8% of the total population of India, and the pressure on land is very great.

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India ranks fifth in the world in volume of trade. Raw materials take the biggest place in the export trade, of which jute, tea, cotton, skin and rice form half.

* * * * *

India is ranked among the first ten industrial countries of the world.

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India film industry is the second largest in the world.

* * * * *

Indian textile industry is the leading industry of India : India's tea, sugar, match and vegetable oil industry are among the biggest in the world.

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Sugar takes the third place among Indian industries.

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Tata Iron and Steel works at Jamshedpur are now the largest steel works in the East.

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The India railway system is the biggest nationalized industry in the country.

PUBLIC HEALTH & HYGIENE

It is estimated that nearly 20 lakh people suffer from tuberculosis and about 5 lakhs die of it annually.

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Malaria still continues to take the largest toll of human lives. It has been estimated that at least 100 million persons in the whole of India suffer from malaria every year. The annual mortality on this account is probably of the order of 1—1½ million.

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The birth rate per thousand of population is about 25.5 and death rate is about 17·2 per 1,000 population.

INDIAN INFORMATION

INDIAN BRIDGES

	feet
Upper Sone Bridge ..	10,052
Godavari Bridge ..	9,096
Mahanadi Bridge ..	6,912
Willingdon Bridge ..	2,610
Howrah Bridge* (1943)	2,150
Jubilee Bridge (Naihati)	1,213
Meghna Bridge ..	1,213
Duffrin Bridge, Banaras, 1887	3,518
Curzon Bridge, Allahabad, 1905	3,200
Tapti Bridge, 1872 ..	2,556
Izat Bridge, Allahabad, 1912	6,830
Naini Bridge (1865, Allahabad) ..	3,235
Jumna Bridge (1866 Delhi)	2,640
Malaviya Bridge (1887, Banaras)	..
Sutlej Bridge ..	4,210
Alexandra Bridge (Chenab) ..	9,088
Narbada Bridge (1881)	4,687
Hooghly Bridge ..	1,213

SOME INDIAN FLAGS

Indian Union Flag : Tricolour of green, white and saffron with chakra in the centre.

Congress Flag : Tricolour of green, white and orange with charkha.

Muslim League Flag : Bright green and is embossed with a white crescent and star, the emblem of Islam.

Flag of Hindu Mahasabha : Deep orange and is embossed

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* Largest cantilever span bridge in India and the third largest cantilever bridge in the world.

Some Indian Flage—(*Concld.*)

in crimson, with a sword, a cobra entwined with lotus flowers and the Hindu Swastika.

Flag of Indian Communist Party : Red flag embossed with hammer and sickle.

DISTANCES BY RAIL

	Bombay.	*Calcutta.*	*Madras.*
Agra ..	835	790	1239
Ahmedabad	306	1328	1100
Allahabad ..	845	512	1484
Ambala ..	984	1025	1481
Bangalore ..	745	1245	222
Banaras ..	928	429	1461
Bombay ..	—	1223	794
Calcutta ..	1223	—	1032
Kanpur ..	840	630	1602
Darjeeling ..	1611	388	1420
Dibrugarh ..	2051	828	1860
Gaya ..	1057	292	1324
Delhi ..	845	902	1361
Hyderabad (Dn.) ..	491	987	373
Jabalpore ..	616	733	1263
Jodhpur ..	1206	1131	1580
Madras ..	794	1032	—
Lucknow ..	885	616	1386
Madurai ..	1099	1337	305
Mathura ..	868	823	1272
Nagpur ..	520	703	682
Poona ..	119	1342	675
Ranchi ..	1447	251	1283
Saharanpur	974	938	1430
Trichinopoly	1003	1241	209
Viskhapatnam ..	1277	1515	483
Simla ..	1301	1342	1798

GAME SANCTUARIES

Jaldapara Game Sanctuary (W. Bengal) mainly for rhino & buffalo.

Bandipur Game Sanctuary 48 m. from Mysore.

Pariyar wild-life Sanctuary, Travancore.

Sonai Rupa Game Sanscturay, Darrang (Assam).

Prava Reserve, N. Lakhimpur (Assam).

Orang & Lashowa Reserves (Darrang & Nowgong).

Manas Game Sanctuary, Kamrup (Assam).

Khiziranga Game Sanctuary Sibsagar (Assam).

Hailey National Park, U. P.

SOME HIMALAYAN PEAKS*

	feet
Mt. Everest	29,002
K_2	28,250
Kanchanjunga ..	28,125
Makalu	27,790
Broad Peak	27,133
Dhaulagiri	26,795
Mansalu	26,658
Nanga Parvat ..	26,620
Annapurna	26,492
Gossainthan	26,291
Nanda Devi	25,645
Rakaposhi	25,550
Kamet	25,447
Gurla Mandhata ..	25,355
Tirich Mir	25,263
Chomohari	23,996
Badrinath	23,190
Gangotri	21,700
Bandarpunch ..	20,720

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* There are 12 peaks between 26,000 ft. to 27,000 ft. There are 31 peaks between 25,000 ft. to 26,000 ft.

ATTEMPTS ON EVEREST

1920—Permission given by Dalai Lama to climb Everest from Tibetan side	
1921—1st Mt. Everest Expedition under Lt. Col. Howard Bury, succeeded in reaching North Col for the first time	
1922—Expedition under C. G. Bruce	27,300
1924—Mt. Everest Exp. General Bruce and afterwards Norton* **Reached by Norton*	28,150
1933—Mt. Everest Expeditory, Hugh Ruthlege	28,150
1934—Maurice Wilson's lone attempt in which he lost his life	
1935—Eric Shipton's reconnaisance expedition only	
1936—Mt. Everest Exp. by Hugh Ruttlege given up due to bad weather and monsoon snow	
1938—Light mobile expedition by Tilman given up for atrocious weather	
1951—Reconnaisance Expedition by Shipton to discover route from south Col. from the head of Cwm through Nepal	
1952—Swiss Expedition by Dr. Wyss Dunant (reached by Lambert & Tensing)	28,200
1952—2nd Swiss Exp. by Chevalley (Post-monsoon)	26,686
1953—British Exp. led by Col. John Hunt reaches Mount Everest on 29-5-53 (*reached by Tensing and Hillary*)	29,002

ATTEMPTS ON KANCHANJANGA, 28,620 ft.

A. Crowley	1905
E. F. Parmer	1929
Paul Bauar	1929
J. Dyhernforth	1930

CONQUEST OF MAJOR HIMALAYAN PEAKS

	feet
Trisul by Longstaff (1907)	23,406
Do. by Oliver & K. Singh (1933)	
Do. by Indian Expedition (1951)	
Jonsong Peak by Prof. Dyhrenforth (1930)	24,472
Ramthang Peak by Prof. Dyhrenforth (1930)	23,200
Mukut Parbat by A. E. Riddiford (1951)	23,760
Mount Kamet by F. S. Smythe (1931)	25,447
* *Nanda Devi* by Tilman & Odell (1936)	25,645

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* Highest peak in the Indian Territory.

Conquest of Major Himalayan Peaks—(*Contd.*)

Annapurna by French Expedition, leader M. Herzog (1950) ..	26,502
Tirich Mir by Norwegian Expedition (1950)	25,263
Satopanth by Roch & Sutter (1947) ..	23,240
Dunagiri by A. Roch (1939)	23,184
Kedarnath by Roch & Sutter (1947) ..	22,772
Bandar Punch by J. T. M. Gibson (1950) ..	20,720
Panch Chuli Peak by P. N. Nikore (1953) ..	22,650

CONQUEST OF NANGA PARVAT, 28,620 ft.

A. F. Mummery (1895)	20,000
Dr. W. Merkl (1932) ..	23,000
Dr. W. Merkl (1934) ..	26,000
Dr. Karl Wien (1937) ..	21,648
Dr. Paul Bauer (1938)	23,000
Buhl Herman (1953) ..	28,620

HIGHEST INDIAN STRUCTURES

	feet
* Kutub Minar ..	238
Tower of Victory, Chitore	122
† Victoria Memorial	..
Ochterloney Monument, Cal.	152
Tower of Victory, Chitore	122
4 minarets of Taj (each)	137
Taj Mahal	178
Char Miner (Hyderabad)	186
Gol Gumbaz (Bijupur) ..	198
Gopuram of Madura Temple (Largest one) ..	152
Buland Darwaja (Fatehpur Sikri)	176
Rajabai Tower (University), Bombay ..	260
Cal. High Court ..	180

CHANGES NAMES OF INDIAN PLACES

Old Names	*New Names*
Calicut ..	Kozhikode
Cawnpur ..	Kanpur
Muttra ..	Mathura
Benares ..	Banaras
United Provinces ..	Uttar Pradesh
Central Provinces ..	Madhya Pradesh
Ajmere-Merwara ..	Ajmer
Vizagapatam	Visakhapatnam
Bezwada ..	Bijayawada
Trichinopoly	Tiruchirapally
Ganges ..	Ganga
Madura ..	Mathurai

INDIAN FELLOWS OF THE ROYAL SOCIETY

A. Carsetji.
S. Ramanujam.
Sir J. C. Bose.
Dr. Megnad Saha.
Sir C. V. Raman.
Dr. Birbal Sahani.
Dr. K. S. Krishnan.
Sir S. Bhatnagar.
Dr. H. J. Bhabha.
Prof. S. Chandrasekhar.
Prof. P. C. Mahalanobis.

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* 279 steps.

† from ground level to the base of the victory figure.

INDIANS IN THE BRITISH PARLIAMENT

Sir Muncherjee Bhowanagree (Conservative).
Dadabhai Naoroji (Liberal).
Sapurji Saklavala (Communist).
Lord Sinha of Raipur (House of Lords).
Lord Sinha, Second Baron of Raipur (House of Lords).

INDIAN PRIVY COUNCILLORS

Syed Ameer Ali.
Sir B. C. Mitter.
1921—V. S. Srinivasa Sastri.
1926—Lord Sinha.
1930—Sir D. F. Mulla.
1931—Sir Shadilal.
1934—Sir Tej Bahadur Sapru.
1934—H. H. The Aga Khan.
1936—Sir Akbar Hydari.
1939—Dr. M. R. Jayakar.
1941—Sir C. Madhavan Nair.

INDIAN PEER OF THE BRITISH REALM

Sinha, Aroon Kumar (b. 1887).
Heir—Hon'ble Sudhindra Sinha (b. 1921).

NOBEL PRIZE WINNER

1913—Rabindranath Tagore.
1930—Sir C. V. Raman.

STALIN PEACE PRIZE

1952 .. Dr. Safiuddin Kitchlu

INDIAN WINNERS OF VICTORIA CROSS

(1) Great War, 1914—1918

Ishar Singh (*Naik*, 28th Punjabis) Waziristan, 1921.
Mir Dost (*Subadar*, Coke's Rifles) Great War, 1915.
Shahamad Khan (*Naik*, 89 Punjabis) Great War, 1916.
Chatta Singh (*Sepoy*, 9th Bhopal Inft.) Great War, 1916.
Darwan Singh Negi (*Naik*, 39th Garhwal Rif.) Great War, 1918.
Karnabahadur Rana (*Naik*, 23rd Gor. Rif.) Great War, 1918.
Khudadad Khan (*Naik*, 129th Balu.) Great War, 1914.
Kulbir Thapa (*Rifieman*, 23rd Gor. Rif.) Great War, 1915.
Lala (*Lance-Naik*, 41st Dogras) Great War, 1916.
Govind Singh (*Lance-Dafadar*, 28th Lancers) Great War, 1918.
Badlu Singh (*Ressaldar*, 14th Cavalry) 1918.
Gabar Singh Negi (*Rifleman*, 39th Garhwal Rif.) Great War, 1915.

(2) World War II, 1939—1945

2nd Lt. Premindra Singh Bhagat (*Indian Engineers*) Middle East, 1941.
Subedar Richpal Ram, 6th *Rajputana Rifies (Posthumous Award)* Middle East, 1941.
Havildar Prakash Singh, 8th Punjab Regiment, Arakan, 1943.
Havildar-Major Chhelu Ram, 6th Rajputana Rifles (*Posthumous*) Tunisia, 1943.

Indian Winners of Victoria Cross—(*Contd.*)

Lt. Col. A. E. Cumming (12th Frontier Force Rifles, Indian Army), Malaya, 1942.

Habildar Jajee Ghale, 5th Royal Gorkha Rifles, Chin Hills, Burma, 1943.

Jem. Abdul Hafiz, 9th Jat Regt. (*Posthumous Award*) Imphal, July, 1944.

Subedar Lalbahadur Thapa, 2nd Gorkha Rifles, Tunisia, 1943.

Rfn. Bhanbhogta Gurung, 2nd Gorkha Rifles, Burma, 1945.

Rfn. Lacchiman Gurung, 8th Gorkha Rifles.

Lt. Karamjit Singh, 415th Punjab Regiment (*Posthumous*), Burma.

Sepoy Namdeo Jadav, 1st Marhatta Light Infantry, Italy.

Sepoy Ali Haidar, 6th Frontier Force Rifles, Italy, 1945.

Major F. G. Blaker, 9th Gorkha Rifles.

Sepoy Kamal Ram, 8th Punjab Regt., Italy, 1944.

Naik Nand Singh ; 11th Sikh Regt., Arakan Front, 1944.

Rfn. Ganju Lama, 7th Gorkha Rifles, Imphal, 1944.

Naik Agan Singh Rai, 5th Royal Gorkha Rifles, Bishenpur, Silchar, 1944.

Subedar Netra Bahadur Thapa, 5th Royal Gorkha Rifles (*Posthumous*), Bishenpur, 1944.

Naik Yeshwant Ghadge, 5th Mahratta L. I. (*Posthumous*), Italy.

Rfn. Tul Bahadur Pun., 6th Gorkha Rifles, Burma Front, 1944.

Rfn. Sher Bahadur Thapa, 9th Gurkha Rifles (*Posthumous*), Italy, 1944.

Jem. Ram Sarup Singh, 1st Punjab Regt. Burma (*Posthumous*).

Capt. M. Allmand, 6th Gorkha Rifles (*Posthumous*).

Rfn. Thaman Gurung, 5th Royal Gorkha Rifles, Italy (*Posthumous*).

L. Naik Sher Shah, 7/16th Punjab Regiment, Burma (*Posthumous*).

Naik Gian Singh, 15th Punjabi Regiment, Burma.

Naik Fazal Din, 10th Baluch, Regiment, Burma (*Posthumous*).

Hav. Umrao Singh, Royal Indian Artillery, Burma.

Sepoy Bhandari Ram, 10th Baluch. Regiment, Burma.

GEORGE MEDAL*

Tenzing Norkey, 1953

WINNERS OF PARAM VIR CHAKRA

(*Republican India's highest decoration for gallantry*)

Major Somnath Sharma, 4th Bn. Kumaon Regt. (*Posthumous*).

L|NK Karam Singh, 1st Bn. Sikh Regiment.

2|Lt. Rama Raghoba Rane, Corps of Engineers.

Com. Hav-major Piru Singh, *Rajputana Rifles*, 1953.

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* One of the highest British civilian awards for gallantry, given only for acts of the greatest heroism or the most conspicuous courage.

GOVERNOR-GENERALS OF INDIAN UNION

Lord Louis Mauntbatten 1947-48
C. Rajagopalachari 1948-49

PRESIDENT, INDIAN UNION

Dr. Rajendra Prasad 1950

INDIAN PARLIAMENT

House of the People : Speaker—G. V. Malvankar 1952.
Council of States : President—Dr. S. Radhakrishnan 1952.

PRESIDENTS, LEGISLATIVE ASSEMBLY, INDIA

Sir Frederick Whyte (1920-25).
V. J. Patel (1925-30).
Sir Curimbhoy Ibrahim (1930).
Sir Sanmukham Chetty (1930-33).
Sir Abdur Rahim (1933-45).
G. V. Mavlankar (1946-47).

SPEAKER, CONSTITUENT ASSEMBLY OF INDIA

Dr. Rajendra Prasad, 1947—1949.

INDIAN NATIONAL CONGRESS PRESIDENTS

(First Session, 1885)

1885—Bombay—W. C. Bonnerji.
1886—Calcutta—Dadabhai Naoroji.
1887—Madras—B. Tyabji.
1888—Allahabad—George Yule.
1889—Bombay—Sir W. Wedderburn.
1890—Calcutta—Sir P. Mehta.
1891—Nagpur—P. Ananda Charlu.
1892—Allahabad—W. C. Bonnerji.
1893—Lahore—Dadabhai Naoroji.
1894—Madras—Alfred Webb.
1895—Poona—S. N. Banerji.
1896—Calcutta—R. M. Sayani.
1897—Amraoti—C. Sankaran Nair.
1898—Madras—A. M. Bose.
1899—Lucknow—R. C. Dutt.
1900—Lahore—N. G. Chandravarkar.
1901—Calcutta—D. E. Wacha.
1902—Ahmedabad—S. N. Banerji.
1903—Madras—Lalmohan Ghose.
1904—Bombay—Sir Henry Cotton.
1905—Benares—G. K. Gokhale.
1906—Calcutta—Dadabhai Naoroji.
1907—Surat—Rash Behari Ghose.
1908—Madras—Rash Behari Ghose.
1909—Lahore—Pt. M. M. Malaviya.
1910—Allahabad—Sir W. Wedderburn.
1911—Calcutta—Bishen N. Dar.
1912—Patna—R. N. Mudholkar.
1913—Karachi—Nawab Saiyed Muhammad.
1914—Madras—B. N. Bose.
1915—Bombay—Sir S. P. Sinha.
1916—Lucknow—A. C. Majumdar.

Indian National Congress Presidents—(*Concld.*)

1917—Calcutta—Dr. Annie Besant.
1918—Bombay (Spl.)—Hasan Imam.
1918—Delhi—Pt. M. M. Malaviya.
1919—Amritsar—Pt. Motilal Nehru.
1920—Calcutta (Spl.)—Lala Lajpat Rai.
1920—Nagpur—C. Vijaraghavacharjar.
1921—Ahmedabad—Hakim Ajmal Khan.
1922—Gaya—C. R. Das.
1923—Delhi (Spl.)—Abul Kalam Azad.
1923—Cocanada—Mahomed Ali.
1924—Belgaum—M. K. Gandhi.
1925—Cawnpore—Sarojini Naidu.
1926—Gauhati—Srinivasa Iyengar.
1927—Madras—Dr. M. A. Ansari.
1928—Calcutta—Pt. Motilal Nehru.
1929—Lahore—J. L. Nehru.
1931—Karachi—Sardar V. Patel.
1932—Delhi—Seth Ranchhodlal.
1933—Calcutta—Mrs. Nellie Sen Gupta.
1934—Bombay—Rajendra Prasad.
1935—Lucknow—J. L. Nehru.
1937—Faizpur—J. L. Nehru.
1938—Tripuri—Subhas Bose.
1940—Ramgarh—A. K. Azad.
1946—J. L. Nehru.
1946—Meerut—J. B. Kripalani.
1947—Dr. Rajendra Prasad.
1948—Jaipur—Dr. P. Sitaramiyya.
1950—Nasik—P. D. Tandon (resigned).
1951—Meerut—J. L. Nehru.
1952—Hyderabad—J. L. Nehru.
1953—Kalyani—J. L. Nehru.

INDIAN CHRONOLOGY

B.C.

3000—Mohenjo-daro and Harappa civilisation.
2000 to 1500—Period of Vedic civilisation.
563-483—Birth and death of Buddha.
540-468—Traditional dates of birth and death of Mahavira.
377—Buddhist Council at Baisali.
326—Alexander's Invasion of India.
324—Rise of Maurya dynasty.
305—Seleucus Nicator defeated by Chandra Gupta Maurya.
273—Accession of Asoka.
259—Missionaries sent to foreign lands by Asoka.
58—Beginning of Vikrama era.

A.D.

320-500—Gupta dynasty; Golden Age of Indian art, science and literature.
320—Accession of Samudra Gupta.
405-11—Fa Hien travels in Gupta Empire.
448—First Hun invasion.
480-90—Break up of Gupta Empire.
606-647—Reign of Harsavardhan.
643—Hiuen TSang arrives in India.
712—Arab conquest of Sind.
731—Yasovarman's embassy to China.
1001—First Muslim invasion of India by Mahmud of Ghazni.

4505

Indian Chronology—(*Concld.*)

1038—Atisa sent on Buddhist mission to Tibet by Nayapal, King of Bengal.

1070—Rajendrachola.

1192—Defeat and death of Prithvraj, the last Rajput King of Delhi.

1194—Jai Chand, the King of Kanauj defeated by Qutb-ud-din at Chandwara.

1228—Conquest of Assam by the Ahoms.

1236—Death of Iltutmish—Accession of Raziyya.

1936—Foundation of Vijayanagar Kingdom.

1347—Foundation of Bahmani Kingdom of Deccan.

1951—Accession of Bahlol Lodi to throne of Deccan.

1469—Birth of Guru Nanak, founder of Sikh religion.

1494—Foundation of Agra by Sikandar Lodi.

1498—Vasco da Gama reaches Calicut.

1510—Portuguese capture Goa.

1526—Establishment of Mughal Empire by Babar.

1530—Death of Sher Shah.

1565—Battle of Talikota—overthrow of the Vijayanagar Kingdom.

1586—Annexation of Kashmir by Akbar.

1597—Death of Maharana Pratap.

1600—East India Comnay founded under Royal Charter.

1605—Death of Akbar.

1627—Birth of Sivaji.

1707—Death of Aurangzeb.

1757—Battle of Plassey: English becomes master of Bengal.

1751—Third battle of Panipath.

1765—Grant of Dewani of Bengal, Bihar and Orissa to E. I. Co.

1774—Regulating Act enforced in India.

1780—Ranjit Singh establishes a Sikh Empire.

1790—Third Mysore War.

1793—Permanent settlement of Bengal.

1814-16—Anglo-Gorkha War.

1830—Rammohan Ray visits England.

1857—Indian Mutiny.

1858—Transfer of India from Company to the Crown.

1869—Birth of Mahatma Gandhi.

1885—First Meeting of the Indian National Congress.

1905—Partition of Bengal.

1914—Gandhi returns to India from South Africa.

1919—Montagu-Chelmsford Reforms; Jalianwalabag massacare at Amritsar (13th April).

1920—1st Non-Co-operation Movement in India.

1930—Mahatma Gandhi launches C. D. Movement—1st session of the Round Table Conference.

1931—Gandhi-Irwin Pact.

1935—New Government of India Act.

1937—Inauguration of Provincial Autonomy.

1942—Cripps Mission—Quit India Movement.

1946—Cabinet Mission Plan—First Session of the Indian Constituent Assembly.

1947—Partition of India—India becomes Independent—Kashmir attacked by Pakistan.

1948—Martyrdom of Mahatma Gandhi (Jan. 30).

1949—India's New Constitution passed into law.

1950—India becomes Republic (26th Jan.).

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NOTABLE DEATHS

	Born	*Died*
Sir K. Seshadri Iyer	1845	1901
M. G. Ranade, Social Reformer, Scholar and Jurist	1842 (18 Jan.)	1901
Dr. Mahendralal Sarkar	1833	1904
Sir J. N. Tata	1839	1904
Devendranath Tagore	1817	1905
A. M. Bose	1847	1906
W. C. Bonerjee, 1st Cong. President	1844	1906 (19 July)
P. Ananda Charlu	1842	1908
Sir B. Bashyam Iyangar	..	1908
Lalmohan Ghose, Congress President	1849	1909
R. C. Dutt	1848	1909 (30 Nov.)
Girish Chandra Ghosh, Dramatist	1843	1911
G. K. Gokhale, statesman, founder of Servants of India Society	1866	1915
Sir Pherozeshah Mehta	1945	1915
Bal Gangadhar Tilak	1856	1920
S. Ramanujam	..	1920
Sir Rashbehari Ghose	1845	1921
Ambica C. Majumdar, Congress President	1851	1922
Aswini Kumar Dutta	1856	1923
Sir N. G. Chandraverkar	1855	1923
Sir Asutosh Mukherjee	1864 (29 June)	1924 (25 May)
C. R. Das	1870	1925
Sir S. N. Banerjee	1848	1925
Sir R. G. Bhandarkar	1873	1925
Lala Lajpat Rai, Indian Patriot	1865	1928
Lord Sinha of Raipur	1863	1928
Syed Ameer Ali	1849	1929
Pt. Motilal Nehru	1861	1931
J. M. Sen Gupta	1885	1933 (23 July)
Sir Ali Imam	1869	1932
V. J. Patel	..	1933
Sir Sankaran Nair	..	1933
Dr. M. A. Ansari	1880	1936
Sir R. N. Mookerjee	1854	1936
Sir J. C. Bose	1858	1937
Sarat Chandra Chatterjee	1867	1938
Sir Muhammad Iqbal	1877	1938
Sir Brojendranath Seal	1864	1938
Rabindranath Tagore	1861	1941
Sir Tej Bahadur Sapru	1875	1948
Mahatma Gandhi	1869 (20 Oct.)	1948 (30 Jan.)
Sarojini Naidu	1879 (13 Feb)	1949
Sri Aurobindo	1872 (15 Aug.)	1950 (5 Dec.)
Sardar V. Patel	1875	1950 (15 Dec.)

Notable Deaths—(*Concld.*)

Syed Ahmed Khan ..	1817	1898
Bipin Chandra Pal ..	1858	1932
Dr. Shyama P. Mukerjee ..	1901	1953 (23 June)
Srinivasa Shastri ..	1869	1946
Dadabhai Naoroji ..	1825	1917
Iswar Chandra Vidyasagar ..	1820	1891
Raja Rammohan Roy ..	1774	1833
Ramkrishna Paramhansa ..	1834	1886
Keshab Ch. Sen ..	..	1884
Dayanand Saraswati ..	1824	1882
Bankim Ch. Chatterjee, Bengali novelist ..	1838	1894
Swami Vivekananda ..	1862	1902
Michael Madhu Sudhan Dutt ..	1824	1873
Rajendralala Mittra ..	1824	1891

INDIAN POLITICAL PARTIES

Indian National Congress—With the dawn of Independence, the Congress has now become a purely political party. The object of the Indian National Congress as adopted in 1948 is now "the well-being and advancement of the people of India and the establishment in India by peaceful and legitimate means of a Co-operative Commonwealth based on equality of opportunity and of political, economic and social rights and aiming at world peace and fellowship."

All India Muslim League—Started in 1906 for securing special safeguards and privileges for Muslims ; was successful in securing separate communal representation in 1909 ; put forward in 1940 the demand for Pakistan which was eventually accepted ; its success was due to its spreading two-nations theory which had to a great extent been responsible for its being able to bring within its fold as followers the majority of the Muslims in India. Had no definite political or economic objective, except the establishment of Pakistan. After the establishment of Pakistan, Muslim League split into two : Pakistan Muslim League and Indian Union Muslim League. In Pakistan it is the government party and in India it is a small political party in some provincial legislatures. The Indian counterpart has by resolution given up communal politics.

Communist Party of India—Founded in 1924. Once a left-wing party within the Congress, was disaffiliated due to the party's support for the war and its attitude towards the August Revolution. The party moulds its policy with reference to the policy of Russia in international affairs, rather than according to the conditions obtaining in India. They look to Russia for guidance and inspiration. The party's aim is "the organisation of the toiling masses in the struggle for the victorious anti-imperialist and agrarian revolution for complete national indipendence, for the establishment of a people's democratic state led by the working class, for the realisation of the dictatorship of the proletariat, and the building up of Socialism according to the teachings of Maxism and Leninism."

It calls for the confiscation and nationalisation of all foreign capital, complete withdrawal from the British Commonwealth of Nations and a united front with 'peace-loving countries and friendship with them," having first brought about a cessation of flirtation between world power *blocs* and leanings towards United States of America."

Proja Socialist Party—Congress Socialist Party, was started in 1934 within the Congress ; but in 1947 it completely broke away from the Congress and dropped the word *Congress* from the nomenclature of the party. The object of the party as affirmed in Kanpur Conference of 1947—"In the Socialist society of our conception, the individual, *i.e.*, the worker is free and the State has no power to deprive him of his rights and privileges except through the processes of law. Economic power, *i.e.*, the power to plan production, the power to determine the condition of work, prices, the distribution of the national produce—all these powers are held not exclusively by the State bureaucracy but shared by Trade Unions, co-operative and other suitable representative bodies of working men...." In the 1951 general elections, the party suffered a heavy defeat ; so in 1952 Socialist Party and Krishak-Mazdur Praja Party established by Acharya Kripalani merged into one party and this new party been named Praja Socialist Party.

Forward Bloc—Came into existence in 1938 when Mr. Subhas Bose sought to rally leftists against the Congress orthodoxy. It favours a programme of direct action and repudiates all compromise. The party's objective now is the establishment of Socialist State in India with complete severence of relations from the British Commonwealth.

Forward Bloc (Marxist)—This is a group which has severed its connection with the parent body and has formed a new party on January 23, 1950. The Desh Sevak Party of Punjab has merged into it.

New Humanist Movement—A new movement formed by Mr. M. N. Roy after the dissolution of the Radical Democratic Party in Dec. 1948. The objectives of the party is "Radical Democracy" which will be attained through collective efforts of spiritually free men and women united in a political party with determination of creating a new order of freedom. The movement has been started not with the object of seizing political power, but with the object of educating the masses in their new ideology.

Bharat Sevak Samaj—New national organisation brought into existence as a result of government initiative. It is a scheme evolved to rally all patriots for the task of quickly building up economic strength of the country promoting the social well-being of the community and mitigating privations and hardship of its less-favoured sections. It is not a political organisation. It welcomes into its fold men of all thoughts save those who believe in destroying the present order of things by violent methods and those who want to prepetuate the present day social injustice by believing in communal and sectarian idealism.

National Liberal Federation—was formed in 1908 when the moderates broke away from the Congress and formed a separate party. It advocated gradual progress through peaceful and constitutional means as opposed to the revolutionary creed and policy of the Congress. Their policy is very 'moderate' that it has never found support of the Indian masses. It represents a doctrine which has no place in a dynamic India. The Liberals are opposed to direct action of any sort. They are wedded to constitutional forms of agitation whatever they may mean.

Scheduled Caste Federation—Party was established by Dr. Ambedkar. It has no political or economic platform. It has centred all its agitation for demanding extraordinary privileges. After partition it has changed its outlook.

Hindu Mahasabha—The aim of the Mahasabha is the protection and promotion of all that contributes to the advancement, strength and glory of Hindu Rashtra, Hindu culture and Hindu polity, and as a means to that end, to achieve Hindu Raj and re-establish the integrity of the State of Bharat by constitutional means.

Peseants and Workers Party—The party's programme includes "severance of all connection with British imperialism, abolition of landlordism without compensation, confiscation of foreign capital invested in banks and industries." The programme also urges nationalisation of big intrustries, banks and insurance companies and the re-organisation of States on a linguistic basis. This is a Marxist-Leniniest Party following the guidance of Cominform.

Democratic Vanguard—This party was formed in 1943 by those who seceded from the Radical Democratic Party. Its object is the "attainment of the democratic revolution" in India.

Rastriya Swayam Sevak Sangh—It was started in 1925. Its objects are the military training of the Hindus, development of social consciousness and building up of character, and promotion of physical, intellectual and moral well-being of the Hindus and the establishment of Hindu Rashtra. The party has now stated its main objective as revival of Hindu culture.

Socialist Republican Party—was started by late Sarat Chandra Bose in 1948 with the object of complete independence of India free from all foreign influences. The setting up of Socialist Republic on the linguistic basis and the establishment in the country of a Union of Socialist Republics are the main objects of the party.

Sarvodaya Samaj—A fellowship of those who believe in the Gandhian ideals. It is not an organisation but a voluntary brotherhood of constructive workers who have faith in Gandhian ideals of truth and non-violence. Its central idea is the insistence on the purity of means in the same way as of ends. Khadi, Harijan uplift, service to Adibasis, leprosy relief work and Promotion of communal harmony form the main activities of Samaj.

Revolutionary Socialistic Party of India—Preaches Marxist doctrine and wants to establish a socialist state in India through revolution.

Revolutionary Communist Party of India—another Marxist party in India which calls itself Leninist, which characterizes Congress as bourgeois organisation. It is anti-Soviet with Tortskyite leanings.

Kishan Party—Is a peasant movement with socialistic outlook. Its programme is the amelioration of the Indian peasants. Though separate from the Congress, its programme is identical with Congress.

All India Muslim Majlis—Progressive Nationalist Party of Muslims, was opposed to creation of Pakistan and supporters of Congress ideals.

Jamiat-ul-ulema-Hind—An organisation of Moslem divines and religious teachers. It has always supported the political programme of the Congress. It was a supporter of Indian independence on religious grounds. It has now dropped its political programme.

Shia Political Conference—Represents Shia Moslems and is the most important minority among the supporters of the Congress.

Momin Ansar Conference—Its main policy has centred on opposition to Muslim League and to Pakistan. The Conference is the full supporter of Congress politics.

Jan Sangh—Formed by Dr. Shyama Prasad Mukerjee with the object of fighting the Congress in the general elections.

Other Parties—During General Election of 1951 in India numerous parties came into being, both Indiawide or provincial. The following are some of the parties which took part in the elections—*Ram Rajya Parishad*, *Akali Party*, *Lal Communists*, *Zamindara League*, *Krishikar Lok Party*, *Gorkha League*, *Jharkand Party* (Chota Nagpur), *Justice Party* (Madras), *Commonwealth Party*, *Tamilnad Toilers Party*, *Ganatantra Parisad* (Orissa), *Janata Party*, (Bihar), *Peasants and Workers Party*, etc.

FIRST IN INDIA

Largest River—Indus.

Largest Lake—Wular Lake, Kashmir.

Highest Peak in India—Nanda Devi (25,660 feet).

Largest populated City—Calcutta including Howrah (29, 82,. 307).

Highest Waterfull—Gersoppa Waterfall, Mysore, (960 ft. high).

Largest State—Madhya Pradesh, 1,30,272 sq. mile.

Largest Indian State—Jammu and Kashmir.

Highest rainfall—Cherrapunji. 779.

Largest Forest Province—Assam.

Largest Delta—Sundarbans Delta (8,000 sq. miles).

Longest Cantilever Span Bridge—Howrah Bridge.

Largest Cave Temple—Ellora, Hyderabad.

Longest Corridor—Rameswaram Temple Corridor (4,000 ft. long).

Largest Mosque—Jumma Masjid, Delhi.

Longest Bridge—Sone Bridge.

Largest Sugar-cane producing area—Uttar Pradesh.

Most literate parts of India—Travancore-Cochin.

Longest electric train—Bombay to Poona.

Highest Gateway—Buland Darwaja (Fatehpur Sikri, 176 ft. high).

Tallest Statue—Statue of Gomateswar (Mysore) 56 ft. high.

First in India—(*Concld.*)

Longest Platform—Sonepur Platform (O. T. R.).

Longest Road—Grand Trunk Rd. (1,500 miles).

Highest Tower—Kutab Minar, Delhi.

Largest Dome—Gol Gambuz, Bijapur.

Largest Fair of Animals—Sonepur fair.

Longest Canal—in Nepal and Oudh and Rohilkhand.

Largest Zoo—Zoological Gardens, Alipur, Calcutta.

Largest Museum—Indian Museum, Calcutta.

Most Populated State—Uttar Pradesh.

FIRSTS AMONG INDIANS

Indian Governor—Lord Sinha of Raipur,

F.R.S.—A. Carsetji,

Congress President—W. C. Bonnerjee.

Nobel Prize winner—Rabindranath Tagore.

I.C.S.—Satyendranath Tagore.

Bar-at-Law—J. M. Tagore.

Judge High Court—Ramaprosad Roy.

Member, Viceroy's Executive Council—Sir S. P. Sinha.

Member of the India Council—K. G. Gupta.

Peer of the Br. Realm—Lord Sinha.

Wrangler of the Cambridge University—A. M. Bose.

1st *Woman President of U.N.*—Vijayalakshmi Pandit.

Woman President of the Congress—Mrs. Sarojini Naidu.

1st in I.C.S. Exam.—Sir Atul Chatterjee.

Member of the Br. Parliament—Dadabhai Naoroji.

Winner of the Victoria Cross—Khudadad Khan.

Member of the Privy Council—Syed Ameer Ali.

Member of the House of Lords—Lord Sinha.

Commander-in-Chief—General Cariappa.

I.M.S.—Dr. Goodeve Chuckravarti.

Woman M.A.—Chandramukhi Bose.

Test cricket player—K. S. Ranjitsinjhi.

HILL STATIONS

Nainital—is a hill sanatorium in Kumaun Hills, picturesquely situated on the shores of a beautiful lake. This lake has a superficial area of about 120·5 acres and a mile in diameter. A favourite summer resort. Altitude 6,350 ft. It is reached from Kathgodam on the Northern Railway 22 miles distant.

Mussoorie—Is a hill sanatorium, on the southern slopes of the Himalayas, 14 miles from Dehra Dun. From Dehra Dun to Mussoorie by motor cars. Altitude 6,600 ft. above sea level. Nearest railway station is Dehra Dun.

Lansdowne—Is situated in Garhwal about half way between Mussoorie and Nainital. It commands a wonderful view of snows, the Badrinath block being nearest. It is reached by Northern Ry. to Kotdwara *via* Najibabad junction and there is good service of motor cars, a distance of 26 miles ; altitude 6,060 feet.

Almora—In Kumaun Hills. Altitude 5,500 ft. above sea level. Mean annual rainfall 45·55 inches ; fine views of snow. From Almora some of the highest peaks of the western Himalayas can be seen against the horizon. The main attraction for hickers is the famous Pindari glacier. Almora to Pindari glacier is 6 miles. Nearest railway station is Kathgodam.

Bhowali—is situated at a height of about 5,600 feet, and is only seven miles from Nainital. Bhowali is famous for its T. B. Sanatorium and is export centre for the famous Himalayan fruits.

Bhimtal—just a little over 14 miles from Nainital is Bhimtal, enveloping a pretty lake which provides an excellent fishing centre.

Cherrapunji—is 30 miles south of shillong and receives more rainfall than any other place in the world, the annual average being 426 inches. The nearest railway station is Pandu, 69 miles along ; altitude 4,455 ft..

Mukteshwar—a beauty spot in the Kumaon Hills. It offers a remarkable view of the surrounding valleys and the mountain gradually rising up to their snow capped glory. The Government of India Veterinary Research Institute is located here.

Ranikhet—is about 40 miles from Nainital and 50 miles from the railway terminus of Kathgodam. Is is 6100 ft. high. Set amidst pine clad hills, it is more or less a veritable garden town and commands an excellent view of the snows.

Pindari Glacier—is famous all over the world. It is five days march from the motor head at Almora. Situated at the heart of the Himalayas, the Pindari Glacier is more magnificent that Jang Frau of Switzerland.

Mount Abu—Is reached by a good motor road from Abu Road Railway station. The range is about 50 miles in circumference. The climate is very healthy and delightfully cool. The average temperature is 60°. Altitude 4,500 ft. above sea level. It is a place of pilgrimage for Jains, for here are celebrated Dilwara temples containing some of the finest specimens of Jain carving in India, whilst the temples themselves are prominent alike for their beauty and as typical examples of Jain architecture.

Bangalore—The cantonment is the largest in South India. Altitude 3,000 ft. above sea level.

Coonoor—on the Nilgiri Hills in the Madras Presidency : Altitude 6,740 ft. above sea level. Nearest railway station is Coonoor. It is reached from Ootacamund by rail.

Gulmarg—is at a distance of 30 miles from Srinagar, and is one of the finest pleasure resorts of Kashmir, popular for skiing, trekking and other winter sports.

Dalhousie—Altitude 7,867 ft. above sea level and 51 miles from Pathankot railway station reached by motor road.

Darjeeling—Altitude, 7,168 ft. above sea level, magnificent snow views of Mount Everest (29,002 ft.) and Kanchanjungha (28,104 ft.). The minimum temperature in winter is about 30°. It is the centre of a large tea district. It is 369 miles from Calcutta.

Kalimpong—Hill station near Darjeeling. It is also reached from Siliguri by motor (41 miles). 4,000 ft. high.

Kodaikanal—A hill station in Southern India on the upper range of the Pulney Hills in the Madura District. It is 7,000 ft. above the sea level. The nearest railway station is Kodaikanal Road.

Kasauli—A cantonment and convalescent depot in the Simla district situated on the crest of a hill overlooking Kalka Valley, 22 miles from Kalka by motor road. Famous for Pasteur Institute, altitude 6,200 ft.

Kulu & Kangra Valley—lie at the foot of the Dhaula Dhar Range of the Himalayas. Kangra, Jogindernagar, Chamba, Dharmsala, Dalhousie and Kulu are some of the chief holiday resorts. Kulu and Kangra valleys are known for their orchards and tea plantations. The valley is about 4,700 ft. high. The main route is *via* Pathankot. The valley is called the Valley of the Gods due to every village having its own God.

Otacamund—is the leading hill station of South India, situated in the heart of Nilgiris. Altitude 7,500 ft. above sea level. Mean annual day temperature is 57·50°F.

Mahabaleswar—Principal hill station of the Bombay Presidency and summer retreat of the Bombay Government. Altitude 4,500 ft. above sea level. Nearest railway station is Poona, 75 miles.

Matheran—Nearest hill station of Bombay. It is only 2,650 ft. high.

Pachmarhi—in Hosangabad, Madhya Pradesh, is 32 miles from Pipariya Station on Central Ry. The place is only two hours distant by excellent motor road from the railway station of Pipariya. Pachmarhi rise 3,500 ft. above sea level. Pachmarhi derives its name from the "Panch marhi" or 'five huts'—actually five caves on a little hillock. Hindu tradition ascribes them to the Five Pandava brothers who were supposed to have rested there in the course of their wanderings. But probably the caves were constructed in earlier Buddhist times.

Ranchi—Altitude 2,100 ft. above sea level. Mean annual day temperature is 74·9°S. Nearest railway station is Ranchi.

Shillong—is on the Khasi and Jainti Hills. It is headquarters of the Assam Government. Altitude 4,980 ft. above sea level. Average temperature in midsummer rarely reaches 80°F. Cherrapunji, 30 miles south of Shillong holds the world record for rainfall, average 426 inches per annum (in 1861 the rainfall at Cherrapunji was 905 inches). Nearest railway station is Pandu (68 miles).

Simla—is perched on the spurs of the lower Himalayas at a height of 7,000 feet. It is reached by mountain railway connecting Kalka and Simla. Mean temperature is 55°F, and annual rainfall is 70″. It is now the capital of Himachal Pradesh.

Elevations of Leading Health or Pleasure Resorts

	feet		*feet*
Nainital (U.P.) ..	6,350	Kalimpong (W. Bengal)	4,000
Mussoorie (U.P.) ..	6,600	Bangalore (Mysore) ..	3,000
Mount Abu (Rajasthan)	4,500	Coonoor (Madras) ..	6,740
Almora (UP.) ..	5,500	Dalhousie (U. P.) ..	7,060
Darjeeling (W. Bengal)	7,168	Lansdowne (U.P.) ..	6,060

Elevations of Leading Health or Pleasure Resorts—(*Contd.*)

Kadaikanal (Madras)	7,000	Pachmarthi (C.P.)	3,500
Ootacamund (Madras)	7,500	Shillong (Assam)	4,909
Mahabaleswar (Bom.)	4,500	Simla	7,000
Amarnath (Kashmir)	13,000	Srinagar (Kashmir)	5,250
Kasauli (Simla)	6,200	Ranchi (Bihar)	2,100
Metheran (Bom.)	2,650		

PLACES OF INTEREST IN INDIA

Agra—Famous for Taj Mahal and Agra Fort which contain all the glories of Mughal Empire, such as Dewani Khas, Moti Masjid, Jasmine Tower, Dewani-i-am, also tomb of Akbar at Sekandra and Itmud-ud-Dowla.

Amarnath—Situated at a height of nearly 13,000 ft. in Kashmir where thousands of Hindus make pilgrimage in August. There is a motor service from Srinagar upto Pahalgam (7,200 ft.), 60 miles from Kashmir where motor road ends. The cave is about 50 ft. high and 50 ft. deep situated between two huge mountains known as Kailash and Bhaira. At the back of the cave are several ice stalagmites in the shape of *lingams*—the frozen image of gods Siva, Parvati, Kartik and Ganesh, all self-made images of ice.

Aurangabad—Famous district and town in the Nizam's State where world-renowned temples and monastic caves of Ellora and Ajanta are located. There is also the historical fort of Daulatabad, the Raoza which contains the tomb of the great Mughal Emperor Aurangazeb and the magnificent tomb of Aurangazeb's wife, Bibi-ka-Naghara, replica of the Taj Mahal of Agra. From the city of Aurangabad all these places can be visited. It is a station on Southern Railway and 71 miles from Manmad on Western Ry.

Amritsar—Famous for Sikh golden temple, the most sacred to the Sikhs and the tank is called the pool of immortality. The pool is enclosed by a wide marble-paved quadrangle 204 ft. long with an archway over it. In the centre of the pool is the Temple, a square building with marble inlaid walls and dome-shaped roof, under which shaded by a silken canopy lies *Granth Sahib*, the holy book of the Sikhs. It is also famous for gold and silver thread, carpets, silks and *pashmina* materials. It derived its name from the sacred tank on which the golden temple is situated. The town stands on the main route of the Northern Railway.

Ajmer—A city of antiquity and celebrity. Ana Sagar Lake is famous for its picturesque surroundings. The place is famous for Durga Khwaja Sahib, the tomb of the famous Muslim Saint Muin-ud-din Chishti. The shrine contains the large drums and candle-sticks taken by Akbar at the siege of Chitor and two mosques, one built by Akbar and the other by Shah Jahan. At seven miles distance, there is Pushkar, the most sacred lake of India. Ajmer lies on the railway between Delhi and Ahmedabad.

Buddha Gaya—Seven miles from Gaya is the sacred Buddhist site of Buddha Gaya, where under a *bodhi-tree*, Buddha conquered Mara and attained Buddhahood. King Asoka erected a temple near the tree. The temple at Buddha Gaya consists of a main tower, raising to a height of 180 ft. in the form of a slender pyramid.

Bhubaneswar—The new capital of Orissa State; contains the famous *Lingaraj Temple*, *Mukteswar Temple* and *Parasurameswar Temple*, and other temples such as *Bhagavati*, *Parvati*, *Ananat Vasudeva*, etc. On the hills known as Udaigiri and Khandagiri, a few miles from Bhuvaneswar, are caves once occupied by Jain monks, containing remarkable carvings, the earliest of which date to the second century B.C.

Banaras—Sacred city of the Hindus, contains numerous temples. The view of the ghats is magnificent, close by is the famous Hindu University. Six miles from the city is the Saranath where in the Mrigadva or Deer Park, Buddha first preached his doctrine.

Chittorgarh—Famous for the *Tower of Victory*—contains wonderful Rajput ruins. It is the old capital of Sisodhiya Rajputs, the proud descendants of the sun-god who were rulers of Udaipur. The Tower of Victory was built by Rana Kumbha in commemoration of his many victories over Mughal invaders. It lies on the direct railway route from Ratiam to Ajmer.

Delhi—Capital of India since 1911, was the capital of seven Empires. Some of the famous relics are—Red fort with Imperial Palace of Shah Jahan, two Audience Halls, Rangmahal, the Hamam, Pearl Mosque and the Mumtaz Mahal inside it, Jumma Masjid, Kutub Minar, Ferozabad, Indraprastha, Tuglukabad etc. Other places of interest are Tomb of Humayun, famous mosques and historic city walls. It occupies a strategic position, standing at the head of the plains of the Ganges and the Indus, the headquarters of all important railway lines of India.

Fathepur Sikri—Short distance of 24 miles from Agra, founded by Akbar in A.D. 1569 in a lonely eminence on the spot where saint Salim Chishti foretold the birth of a son of Akbar. After Akbar's death, the city was deserted within fifty years of its foundation, the reason being lack of water. Interesting places are, imposing pile of great mosque measuring 542 ft. east and 438 ft. north and south, the tomb of Saint Sheikh Salim Chisti, houses of Akbar's wives Miriam and Jodhbhai. *Panch Mahals*—the building of five storeys, Hiran Minar, Buland Darwaza, the famous sand-stone chamber of *Diwani Khas* etc. In the Pachisi Court, laid out in red sandstone squares, he used to play chess with slave girls as pieces. This is the city of sandstone, the specimen of the finest Mughal architecture.

Hampi (or Vijayanagar)—The ruins of this ancient city covering an extent of about 10 sq. miles on the south bank of Tungabhadra river near Hospet railway station on the Guntakul-Hubli section of the Southern Railway is a witness to the rise and fall of this forgotten Hindu Empire which is said to be the finest and the greatest in South India. Hampi is the ruins of Vijayanagar, the ancient capital of Vijaynagar Empire. The ruins are virtually a vast open-air museum of Hindu monuments in the Dravidian style of architecture.

Jaipur—The most typical Hindu city built of pink stone, was founded in 1728 by Sawai Jai Singh II. There is also the famous observatory built about 1718 by the Maharaja Sawai Jai Singh. *Hawa Mahal, Ram Niwas gardens, Albert Hall and Museum* are the interesting places to visit. Seven miles from Jaipur is Amber, a deserted city with an old royal palace overlooking the lake at the entrance to a rocky mountain gorge where Rajput architecture can be seen at its best. Jaipur is famous for brass works, stone carving, ivory and sandalwood work, etc.

Jabalpur—616 miles from Bombay with an elevation of 1,362 ft. The Marble Rocks are situated 13 miles from Jabalpur.

Kanyakumari—The temple of Kanyakumari (the Virgin Goddess) is situated at Cape Comorin. This is the apex of the Indian peninsula, where Bay of Bengal, Arabian Sea and Indian Ocean meet. This is one of the most picturesque spots of India.

Patna—is the capital of Bihar and it spreads eight miles along the Ganga. Things worth seeing at Patna are the huge beehive shaped Gola 90 ft. high and 420 ft. at the base. It was built at the time of Warren Hastings for the granary; Khuda Buksh Oriental Library is famous for its rare collection of Arabic and Persian manuscripts; the ancient city of Pataliputra lies buried under Patna which was once the capital of Chandragupta Maurya. It was also the capital of Asoka.

Madurai—was the capital of Pandiyan Kings and became famous in the 17th century under the Nayak kings. The huge temple of Madurai known as *Minakshi Temple* (Goddess with fish eyes) is the most famous of the South Indian temples and one of the finest edifices of Dravidian architecture. It is dedicated to Siva and his espouse Minakshi. The temple forms a parallelogram, 850 ft. by 750 ft. and is surrounded by nine gopurams one of which is 150 ft. high. The most elaborate stone carving is found in the Hall of a Thousand Pillars. The other important buildings are all associated with the name of Tirumala Naik whose palace is the perfect specimen of secular architecture in Madras State.

Pushkar—is famous for its lake and fair which is held in October-November. The lake is regarded as most sacred in India and the temple of Brahma close to the lake is supposed to mark the spot where the incarnation of the God took place.

Kashmir—Altitude varies from 5,000 to 6,000 ft. Srinagar is the summer capital. It is 5,200 ft. with an area 11 sq. miles; mean temperature in January and February is 25°F. Srinagar is now reached by motor road *via* Pathankot. Srinagar lies along the banks of Jhelum which is crossed by seven bridges. Kashmir has beautiful Mughal gardens built by the Mughal Emperors of Delhi, such as *Shalimar gardens, Nishat Bag, Nasim Bag* and *Chashme Shahi.* Following are the heights of some prominent places of Kashmir—Srinagar 5,200 ft.; Gulmarg 8,700 ft.; Phalgam 7,000 ft.; Amarnath 13,000 ft. Places worth seeing in Kashmir are—Phalgam 60 miles from Srinagar; Dal Lake; Amarnath—97 miles from Srinagar.

Lucknow—is the capital of Uttar Pradesh. The grandeur of the city dates from Asaf-ud-daula, the fourth Nawab. Lucknow is known as the city of gardens. Outstanding among its buildings are the great Imambara with a hall 162 ft. long and 54 ft. wide, the

Husainabad Imambara, Rumi Darwaza, Chattar Manzil and the Wingfield Park.

Nalanda—Nalanda University was founded in the epoch of the Gupta kings and became one of the largest universities of Asia. Hien Tsang, the well-known Chinese traveller who studied at the university in the 7th century has left glowing accounts of its activities. It consisted of 10,000 scholars lodged in special hostels endowed by foreign kings. Instruction was provided in separate colleges with a vast library spread over three buildings. It flourished for 700 years until destroyed by fire by foreign invaders in the 12th century A.D. 29 miles eastwards on the road from Patna stands Bukhtiarpur. Here a road branches off due south to Bihar Shariff (19 miles) whence a smaller road leads to Nalanda station (6 miles). From the station to the excavation site is 2 miles. Throughout the distance of 56 miles from Patna, the roads are serviceable all the year round. The site has been excavated by the Archaeological Department of the Government of India.

Udaipur—is easily one of the most beautiful cities in India. The city is completely encircled by a bastioned wall to which there are five main gates or poles. It stands in a valley amid green hills on the banks of a large lakes with little islands. On these rise from the water's edge marble palaces of pure white that glisten in the sunlight.

Hardwar—It is situated at the place where the Ganges issues forth from the hills on its fertilizing career. *Hari-ki-Pari* is a place of worship, which is a footmark of Vishnu imprinted on a stone into the upper wall of the ghat.

Sarnath—is four miles outside Banaras. In the 'Deer Park' of Sarnath, Gautama Buddha preached his First Sermon on Nirvana. The ruins of monastaries built more than 1,500 years ago draw Buddhist pilgrims from all over the world. Here stands the famous Asoka Pillar of polished sandstone whose lion capital was adopted by the new republic of India as the state emblem. The museum of Sarnath contains may superb speciments of ancient art.

ARCHITECTURAL & HISTORICAL LANDMARKS

HINDU & BUDDHIST

Ajanta Fresco—Famous frescoes in the Buddhist caves of Ajanta, a village in Hyderabad State. It is reached by motor from Jalgaon station on Western Ry.—37 miles from the station. The caves of Ajanta consist of 24 monasteries and 5 temples, some of which are 2000 years old. They are excavated on a wall of almost perpendicular rock, 259 ft. high, sweeping round in a hollow circle and extending a third of a mile from east to west. These caves are situated in the horse-shoe valley. Frescoes are now ranked among the masterpieces of the world's art. The frescoes at Ajanta may be divided into narrative scenes, portraiture and decoration and illustration in the life of Buddha.

Ambar Palace—The deserted capital of Jaipur, where the Palace is considered to include the finest specimens of Rajput architecture.

Barhut—Central India. The sculptures on the stone railing surrounding the Barhut stupa (second century B.C.) represent, with most careful exactitude, episode in the life of the Buddha and the former lives.

Buddhist caves at Karli—One of the most famous of rock-out temples. It is the largest and most harmonious. It dates from the first century B.C. It is 124 ft. long and 45 ft. wide internally.

Buddha-Gaya—The temple (200 ft. high) is built on the site of a shrine erected by the Emperor Asoka. It commemorates the moment when Gautama meditating under the trees of Bodhi attained enlightenment and quality of Buddha after seven years of mental conflict and penance.

Black Pagoda—Close to the sea-coast, north of Puri, stands the 700 years old Konark temple. Legend runs that the sun-god was once seen here rising out of the sea in his golden chariot. Where his shadow fell, devotees endeavoured to build a temple in the shape of the God's chariot, complete with twenty four wheels and seven horses. Though now partly in ruins, their symphony in stone still ranks as one of the India's greatest architectural splendours. 24 miles out of Puri, the road leading to Bhubaneswar, branches off at Pipli towards Konark, which lies 29 miles away. This road is motorable only between December and June. There is an inspection bunglow near the temple, but no refreshments are available.

Temple at Belur—situated in the Mysore State, the temple is one of those exquisite specimens of Hoysala architecture, built 900 years ago by the munificence of the Hoysala King, Vishnuvardhana. Ferguson says—There are many buildings in India which are unsurpassed for delicacy of detail by any in the world, but the temple of Belur surpasses even these for freedom of handling and richness of fancy.

Dilwara Temples—Near Mount Abu, the principal hill station of Rajasthan are the wonderful Dilwara Temples. Five in number, they date from the 11th, 12th and 13th century and are built entirely of marble. The carvings which decorate the interior walls and pillars of the temples are fantastically lavish, yet the general impression is one of perfect harmony. The Temples are the Vimala Shah, built in 1032 and the temple of the two brothers Vastupala and Tejpala built between 1197 and 1247.

Ellora Caves—These Caves can be conveniently reached from Aurangabad on Western Railway and it is 71 miles from Manmad. The caves lie at a distance of 14 miles from Aurangabad. Ellora cave temples, 34 in number are perhaps the largest and most varied in India. There are three classes of caves, Hindu, Buddhist and Jain. Excavated in the scarp of a large rocky plateau, they are remarkable memorials of these great faiths. The most marvellous of all is the stupendous rock-out temples of Kailasa, elaborately carved inside and outside. Hewon entirely out of solid rock, with its massive pillars and colonades, intricate gallaries, painted ceilings and huge sculptures, Kailasa is one of the world's wonders.

Gwalior Fort—is one of the most impressive strongholds of mediæval India. The ascent to the fortress is like that of some fabled palace of the Arabian Nights. Of the many palaces within the walls, the most splendid is that of the Man Singh.

Sanchi Tope—Famous Buddhist stupa in the Bhopal State, 25 miles from Bhopal. Stupa is a hemispherical monument of bricks or stones. Sanchi Stupa is one of the oldest (third—first century B.C.) and best preserved Stupas of India. Stupa stands in the top of a small hill and enclosed by the finest and oldest stone railing in India. The stupa is 120 ft. in diameter and 56 ft. high. The most striking features of the Stupa are the gates which face four cardinal points and measure 28 ft. 5 in. to the top of the third architecture and are profusely carved with scenes from Jataka stories. Near the Stapa is the new memorial erected to preserve the remains of the famous disciples of Buddha, Sariputta and Mangalana.

Tower of Victory, Chitore—A famous Hindu monument raised by Rana Kumbha in 1450 to commemorate his victory over the combined armies of Malwa and Guzerat. It consists of nine stories and is 122 ft. high.

Golden Temple—At Amritsar, the famous Sikh Temple. The temple stands on a raised plinth 65 ft. square in the centre of the tank and is surrounded by verandas.

Gomateswara—Near the town of Sravana Belgola in the State of Mysore, is the giant figure of Gomateswara, the Jain sage. The figure is 57 ft. statue and is carved out of a single stone at the top of a hill. The image is probably 2,000 years old.

Sirguya Frescoes—Are the earliest dateable Indian paintings. These are a group of Buddhist frescoes (100 B.C.) on the walls of a cave in Sirguya in Madhya Pradesh.

Temple of Bhubaneswar—Near Puri, most famous of these are *Rajrani* and *Lingaraj* Temples. Rajrani Temple, erected in the 11th century is a gigantic tower covered with statues and surmounted by receding layers of stones, the whole inward-curving tower ending in a great circular crown and a spire. Lingaraj Temple is the most perfect example of north Indian architecture.

Kajuraho Temples—At Kajuraho in Bundelkhand are grouped about thirty temples dedicated to Siva, Vishnu or Jina. They date from about 950 to 1050. These temples are unrivalled for profusion of ornate detail. In the Kandarya Mahadeva temple, the largest of the group, the details of bewidering complexity are massed together to form a perfectly balanced unity.

Elephanta Caves—Saiva temples in Elephanta Island six miles from Bombay harbour contain an important Saiva rock-out shrine. The famous Trimurti figure of Siva is situated in a niche in the triple aspect of creator, preservatant destroyer.

Saranath—At Banaras, there is the great Buddhist Stupa, a stupendous stone structure 104 ft. in height and 93 ft. in diameter. It commemorates the fact that here Gautama Buddha preached his doctrine to his first five disciples.

Mahabalipuram—or Seven Pagoda is situated on the south coast of Madras. Its temples are bas-reliefs and are cut from living rocks. The most famous is the 'Descent of the Ganges'. This giant image dating from the seventh century is cut in a granite rock 90 ft. long and 43 ft. high. Another famous sculpture is 'Vishnu reclining on the snake Ananta." "Arjun's Penance," another bas-relief is the largest bas-relief in the world.

Temple of Sri Rangam—Two mile north of Tiruchirapalli, on an island formed by the bifurcation of the river Cauvery is Srirangam, famous for the temple of Vishnu which contains a hall of thousand columns and sacred shrine of Ranganathaswami.

Ramaswaram Temple—The temple in Ramaswaram is probably the most perfect specimen of art in the Dravidian style. The holy town of Ramaswaram is built on an island in Palk Straits. The great temple is in the form of quadrangular enclosure 650 ft. broad by 1,000 ft. long. Its glory lies in its vast pillared corridors which extend to a length of nearly 4,000 feet.

MUSLIM

Fatehpur Sikri—23 miles from Agra stands the city of palaces built of red sand-stone by Akbar in 1569-1584. Most important piece of art is Buland Darwaja, 126 ft. high built in commemoration of the conquest of Khandesh. Though the city was abandoned for lack of adequate water supply, what remains of its deserted glory is enough to testify to the perfection which Indo-Muslim architecture had attained in the reign of Akbar. Fatehpur Sikri stands athentic witness of Akbar's splendid effort to achieve a synthesis between Hindu and Muslim cultures.

Gol Gumbaz—At Bijapur, is the 2nd largest dome in the world. This has a floor area of 18,110 sq. ft. This is the largest space covered by any single dome, second largest being that of Pantheon at Rome. It was built in 1656 by Sultan Mohamed Adil Shah to be his last resting place. The 11 ft. wide world-famous whispering gallery hangs out in the interior of the building 109 ft. 6 ins. above the floor. The surface measurement of the dome including four octagonal towers is 205 sq. ft. and the height of the building from the base to the apex of the dome is 198 ft. 6 in. The exterior diameter measures 144 ft. whilst interior diameter is 134 ft. 5 in.

Kutab Minar (238 ft. high) at Delhi—Is one of the masterpieces of Indian technology and art. It is the largest minaret in the world. It was built by Altamash in 1220 A.D. It is made of red stone and marble. It has five storeys.

The Fort, Agra—originally built by Akbar, the Fort saw many additions in the reign of the great builder, Shah Jahan. Its walls, 70 ft. high with otagonal towers and crenellated ramparts enclose many relies of old spendour, great courtyards, gateways, audience halls, mosques and royal apartments.

Red Fort, Delhi—The walls of Red Fort enclose the former great imperial palace of Shah Jahan. The wonders of Red Fort recall the pomp and paseantry, the wealth and magnificence of Mughal times.

Jumma Masjid—Known as India's finest and biggest mosque, Jumma Masjid was built by the Mughal Emperor Shah Jahan at Delhi more than three hundred years ago. The masjid, raised on a lofty basement is 201 feet in length by 120 feet and is flanked by two minarets 130 ft. high.

Mausoleum of Sher Shah—At Sasaram, is a gigantic solid and masculine example of Moslem architecture standing in the middle of a large tank. 350 miles from Calcutta by Grand Trunk Road, Sasaram stands in the left bank of the Stone river.

Taj Mahal—Most famous tomb built by Shah Jahan in memory of his beloved wife—rises with its slender minerets in the midst of magnificent gardens. It is the result of collaboration between Indian, Turkish and European artists. The height of the dome is about 230 ft.

THE CALENDAR

INDIAN CALENDAR—The *Samvat* or *Bikram* era is most widely used specially in northern India, Rajasthan, Gujarat and is believed to have been established by Vikramaditya, the king of Ujjain to commemorate his victory over Saka kings. But there is dispute over the identity of Vikramaditya as there are so many kings bearing this name. It commenced on February 23,57 B.C. Samvat is a luni-solar year.

The *Saka* or *Sakabda* era is used in some parts of South India. There is a historical dispute as to the origin of this era. It is said to date from the Saka king, Salibahana or it begins with the coronation of the Kushan king Kaniska, and dates from 3rd March, 78 A.D.

Bengali Year was originally a reckoning for agricultural and revenue purposes instituted at the time of Emperor Akbar. In A.D. 1555-6 corresponding to Hijri 962-3, solar computation was introduced to the Muslim era Hijri which became the *Fasli* or harvest era of northern India and was adopted as the current official era in Bengal.

Other Eras—The *Buddha era* from 543 B.C. and *Chaitanya era* from 1407 A.D.

Kali Yuga—The oldest era of India is *Kali Yuga*. The Kali Yuga began on the 18th Feb. 3102 B.C. Thus the Kali Yuga is 5056 in 1954.

MAHOMEDAN CALENDAR—The Mahomedan era is based on *Hijra* or flight of Mahomed from Mecca to Medina. The first day of the era is not the actual date of flight but 16th July, 622 A.D. *Hijra* is a purely lunar year consisting of 12 months containing in alternate sequence 30 or 29 days, with the intercalation of one day at the end of the 12th month stated intervals in each cycle of 30 years, the object of the intercalation being to reconcile the date of the first of month with the date of the actual new moon. The mean length of *Hijra* Year is 354 days 8 hours and 48 minutes and the period of mean lunation is 29 days 12 hours 44 minutes. In each cycle of 30 years 19 are common and contain 354 days and 11 are intercalarly (355 days), the latter being called *Kabishah*.

MODERN CALENDAR—The modern calendar is based on the one devised by Julius Cæsar. He fixed the average length of the year at 365½ days as measured by the sun. Each year has 365 days with every fourth year as 'leap year' of 366 days. This so-called Julian calendar was modified by Pope Gregory XIII to correct an error of a few minutes in each year.

JEWISH CALENDAR—is luni-solar; that is to say, the year is solar and month are lunar. In a cycle of 19 years the 1st, 2nd, 4th, 5th, 7th, 9th, 19th, 12th, 13th, 15th, 16th and 18th year have 12 months and the remaining years 13 months of 29 or 30 days each. The length of the ordinary year may be 353, 354 or 355 days and that of the leap year 383, 384 or over 385 days; thus the mean length of the year over a 19-year cycle is just over 365 days. The years are reckoned from the creation of the world, the date of which is taken to be 3760 B.C. Thus the year A.D. 1938 is A.M. (*Anna Mundi*) 5698-99. The day begins at sunset for the purpose of observing the Sabbath and the various feasts and fasts. The time is 2 hours 21 minutes in advance of Greenwich time, being that of meridian of Jerusalam.

PARSI CALENDAR—is generally supposed to relate to the arrival of Parsis in India in 626 A.D.

BUDDHIST CALENDAR—It is reckoned from the death of Buddha in 543 B.C. (the actual date being 487 B.C). The Buddhist year begins from Vaisakhi Purnima. Buddha was born on the Baisakhi full moon day, he took his seat under Bodhi tree at Gaya on full moon day to attain wisdom. It was on the full moon day again that he left the world.

HINDU CALENDAR—Hindus have employed luni-solar cycles made by the combination of solar years and lunar years so treated as to keep the beginning of the lunar year near that of the solar year. In some parts of India solar years are used while in other parts lunar is followed:

The solar year is divided into 12 months in accordance with the successive *Sankrantis* or entrances of the Sun into the sidereal signs of zodiac. The names of the signs are as follows:—

Mesha, the ram (Aries).
Vrishabha, the bull (Taurus).
Mithuna, the pair (Gemini).
Karkata, the crab (Cancer).
Sinha, the lion (Leo).
Kanya, the maiden (Virgo).
Tula, the scale (Libra).
Vrischika, the scorpion (Scorpio).
Dhanus, the bow (Sagittarius).
Makara, the sea monster (Capricorns).
Kumbha, the water pot (Aquarius).
Mina, the fishes (Pisces).

But these are also known in some parts by another set of names preserving connection with lunar months—*Chitra*, *Vaisakha*, *Jaistha*, *Ashara*, *Sravana*, *Bhadra*, *Asvina*, *Kartika*, *Margasirsa* or *Agrahayan*, *Pausa*, *Magha* and *Phalguna*.

The astronomical solar month runs from the moment of one *Sankranti* of the sun to the moment of the next *Sankranti* and as the signs of the Hindu zodiac are all of equal length, 30 degrees, while the speed of the sun varies according to the time of the year, the length of the month is variable.

The days of solar month begin with sun-rise. The days are named as follows: *Ravivara*, the day of sun (*Sunday*); *Somvara*, the day of the moon (Monday); *Mangalvara*, the day of the Mars

(Tuesday) ; *Budhvara*, the day of Mercury (Wednesday); *Brihaspativara*, the day of Jupiter (Thrusday); *Sukravara*, the day of Venus (Friday); *Sanivara*, the day of Saturn (Saturday).

The lunar year consists of primary 12 lunar months. It is of two principal varieties according as it begins with a certain day in the month of Chaitra or with the corresponding day in Kartika. The present names of the lunar months were derived from 12 out of the 27 Nakshatras, supposed to be companions of the Moon during 12 full-moon nights.

NAMES OF MONTHS—January was named from *Janus*, god who presided over the beginning of everything, February from *Februa*, a festival of purification held in that month by the Romans. *Maritus* is the Mars, who was originally a god of agriculture, his month being the one when crops are ordinarily planted. The origin of April is not known. May is named from *Maia*, the mother of Roman god Mercury. June is derived from Juno, the goddess of women and of marriage. July was formerly called quintilius from *quintus*, the fifth, but when Julius Cæsar reformed the calendar, he changed the month's name to Julius in his own honour : Julius became July in English. August was originally called sextilis, afterwards was named August from the Emperor Augustus. Those from September to December are so called from the numbers *Septem*, 'seven' *Octo*, 'eight' *November*, 'nine' and *Decem*, 'ten.'

YEAR—Unit of time is marked by the revolution of the earth in its orbit round the sun. The solar year is 365 days 5 hours, 48 minutes 49·7 seconds. The *Calendar* year consists of 365 days, with one day added every fourth year except years divisible by hundred and not by four hundred.

TIME—Measurement of time is based on the time taken by earth to rotate on its axis (*day*); by moon to revolve round the earth (*month*): and by the earth to revolve round the sun (*year*) ; Day starts at midnight and is divided into 24 hours of 60 minutes, each of 60 seconds. The hours are counted from midnight up to 12 at noon and these hours are designated A.M. and again from noon up to 12 at midnight, which hours are designated P.M. The 24-hour reckoning however ignores A.M. and P.M. and the hours are numbered 0 to 23 from midnight to midnight.

Different ways of telling time—The usual division of the day into "A.M." (ante meridian) and "P.M." (post meridian) groups of 12 hours each has given way for same purposes to the "24-hour" day in many countries. On the "24-hour" clock the hour begins with zero at midnight and run to 23 ; thus 1-30 P.M. is called 13-30 o'clock, and so on. This system is in general use on railway systems. Since it is simpler than the 12-hour system and makes calculation easier, astronomers and navigators use it for tables and records.

On ship board two varieties of time are used. "Greenwich time" or time corresponding to that at Greenwich, England, is kept by an accurate chronometer for use in determining the ship's position. The ship's routine is however governed by "watches" and "bells." The day is divided into six "watches", commencing at noon and each watch is divided into eight parts marked by "bells." One half an hour after a watch begins, "one bell" is struck. Half an hour later, or one hour after the commencement of watch, "two bells" strike, and so on upto "eight bells," when the watch changes and the bells strike all over again from one to eight.

Astronomers usually use *sidereal time*, which is fixed by observing the transits of the stars. A *sidereal day* is the period of one rotation of the earth upon its axis. It starts at noon and contains 24 hours 56 minutes and 4 seconds of mean solar time. A *sidereal year* contains 366¼ sidereal days.

Local Time—When the system of local time is used, it is 12 o'clock (noon) at any region where sun is at its highest point in the sky, and shadows are cast in a line extending north and south.

Standard Time—is the system of time established by common usage or legislative action in any part of the world. Standard time is the local time of standard meridian, but used over an entire time zone.

Daylight Saving Time—Device to make more sunlight hours available for business, industry, leisure by setting all clocks forward one hour during summer, when sun rises early, thus saving evening use of artificial light. This device was first used as national economy during World War I.

Greenwich Mean Time—The International Meridian Conference held in 1884 established the meridian passing through Greenwich, England as the prime meridian, from which the world's time was to be reckoned. The world is considered as being divided into 24 zones each of 15° of arc, or one hour in time apart. The meridian of Greenwich (0°) extends through the centre of the initial zone and the zones to the eastwards are numbered from 1 to 12 with the prefix 'minus' indicating the number of hours to be subtracted to obtain Greenwich time. The zones to the westward are similarly numbered, but prefixed 'plus' showing the number of hours that must be added to get Greewich time.

Time Zones—The 15 degree measurement divides Europe into three time-zones—*Greenwich*, *Mid-European* (one hour faster). *East European* (2 hours faster). The United States is divided into four time-zones—*Eastern*, *Central*, *Mountain* and *Pacific*.

International Date Line—is an imaginary line extending north and south through Pacific Ocean, and is the point at which the traveller must add or subtract a day from the calendar. On a journey westward across the Pacific, he must add a day (for example, by changing Monday, the 17th to Tuesday, the 18th) ; when travelling eastward, he is required to set the date back one day, otherwise he will not be in accord with the local date when he returns to his starting place after making trip round the world.

Indian Standard Time—The Indian Standard time which is 5½ hours ahead of Greenwich Mean Time was first adopted on 1st January 1906. It was based on the mean time of 82½°E longitude which passes through Banaras and Cocanada. Though it was used by Railways and Post and Telegraph Offices, Calcutta had its own time 24 minutes ahead of it. During World War II, a uniform time 6½ hours ahead of Greenwich time was adopted in India. India now observes Indian Standard Time, which is 5½ hours ahead of Greenwich.

Longest and Shortest days—Longest day is the day on which the sun attains its greatest distance from the equator, north or south, accordingly as the place is in the northern and southern hemisphere. This generally falls on June 21. Similar considerations apply to the shortest day of the year which falls on December 22.

Dog Days—are the most unwholesome period of the year in the northern hemisphere. The period of dog days are July 3 to August 15.

HOLIDAYS

Hindu Festival—*Durga Puja*—A national festival in Bengal. The celebration signifies the triumph of good over evil and the subjection of animal passions by human beings. It is also symbolical of womanhood's strength and power to combat all forms of reaction. According to *Puranas*, a demon, Mahisasura was threatening gods and men. Durga, the embodiment of Divine Power took human form and bearing weapons in her ten hands slew the demon. Hence the form in which the goddess is worshipped is that of a warlike figure having ten arms and riding astride a lion. The goddess descends from her heavenly home, the Kailash to visit her children on earth three days every year, accompanied by her two sons, Kartick, a great warrior, and Ganesh, the God of Prosperity and two daughters, Lakshmi, the Goddess of Wealth and Saraswati, the Goddess of Learning. On the fourth day, the immersion ceremony takes place and the image of the goddess is consigned to the waters. The tradition says that on the last day, Ramchandra of Ramayana offered special prayers to the Goddess and thus gained victory over Ravana, the Demon King of Lanka (Ceylon).

Sivaratri—Festival in honour of the Hindu God Siva, one of the Hindu Trinity. It takes place in the month of February-March.

Holi—Hindu festival in March. It marks the coming of the spring. The festival in general is held in honour of Krishna. The day is celebrated in greatest merriment and fun and coloured waters are thrown over relatives and other people. It is a great festival of northern India.

Dewali—A festival of lights held in October-November. The festival is celebrated by means of illuminations and fireworks. In some States Hindu merchants begin their fresh account books. The legend says that its celebration began with the coronation of King Rama.

Ganesh Chaturthi—A great Hindu festival of the Western India generally takes place in September in honour of Hindu God Ganesh who is represented with four hands and an elephant's head. This festival is also known as *Ganapaty Day*.

Dusserah—It is a great festival of northern India ; it usually takes place in the month of September or October. The festival takes place in honour of the victory of Goddess (*Devi*) over the buffalo-headed demon Mahisasur. The festival takes place for nine days known as *Navaratri*. It also commemorates the victory of

Rama over the demon king Ravana. In all important towns of northern India huge effigies of Ravana is made and burnt on the last day of the festival in great pomp and pageant.

Saraswati Puja—Usually takes place in the month of Magh (January-February) on the fifth day (*Panchami*) of the new moon. This day, according to Hindus, heralds the advent of spring. Saraswati is the Goddess of Learning.

Christian Festival—*All Fool's day*—The first day of April, when, from centuries throughout the Christendom it has been customary to place irresponsible tricks on one's neighbours.

Arbor day—Annual tree planting day is generally observed throughout U.S.A., in parts of Canada and Great Britain.

Bank Holiday—In Great Britain a secular day when by law banks are closed, and parties are exempt from presentment or payment of negotiable paper.

Candlemas day—In its ecclesiastical meaning Candlemas is the feast of purification of the Virgin Mary and is observed on February 2. This festival is strictly kept by Roman Catholic Church.

Christmas—Meaning Christ's Mass, is applied to the festival commemorating the birth of Christ celebrated on December 25. The exact date of Christ's birth is unknown. January 6 and December 28 however, were commonly chosen in the 4th century. The general adoption of December 25, first in the west and a little later in the east, dates from the 5th century.

Easter—The season which commemorates the death and resurrection of Jesus Christ is universally regarded as the chief of Christian festivals.

Good Friday—The Friday before Easter, celebrated in commemoration of the crucifixion of Jesus.

Holloween—The name of the popular, boisterous antumn celebration means 'holy eve', the occasion being the eve of 'All Hallows' or 'All-Saints' Day', November 1. It has the Pagan origin.

Lent—A word from the Anglo-Saxon *lencten* meaning "springtime". It is employed to denote the forty days preceding Easter, the period observed in the Catholic Church as a fast.

St. Valentine's day—A festival which falls on February 14. The origin of the observance of this day is uncertain. Among the many interesting folk customs of medieval France and England, was a gathering of young people on St. Valentine's eve. 'Valentine' means sweet-heart.

All Soul's Day—Day of prayer for souls of the dead.

Moslem Festival—*Bakr-id*—The festival commemorates the ordeal of Ismail and the miraculous way in which at the last moment Providence came to his rescue.

Abraham, called Khalilulla, or the friend of God, was put to a terrible test when he was asked to sacrifice what was dearest to him, and he decided to offer the life of his beloved son Ismail. As he was on the point of applying the knife to Ismail's throat, it was revealed to him that this was meant only to test his faith and that he would, on opening his eyes, find a ram which he should sacrifice.

It has also a symbolical aspect : the sacrificial animal standing for the evil in luman nature, which must be continually surrendered at the altar of God.

Muharrum—is a period of mourning in remembrance of the death of Hussain the son of Ali by Fatima, daughter of Mahomed. Hasan, son of Ali was poisoned at the instigation of the future king Khalif Yezid in 49 A.H. and Hussain was murdered at Karbala on the 10th Muharrum 61A.H. —9th October, 680 A.D.

Akhiri-Chahar Sumbha—held on the Wednesday of Safar when Mahomed recovered a little in his last illness and bathed for the last time.

Sabi-barat—(night of allotment)—held on the 16th Saaban when it is supposed that human deeds are measured and their needs allotted.

Ramzan and Id-ul-fitr—Ramzan is the ninth month of the Moslem lunar year and is holy because the Qoran was revealed in that month. The fast is ordained in a magnificent passage of the Qoran. The fast springs from Qoranic instructions for the better communion with God whom all men must honour and worship and that those instrûctions are obeyed by the faithful with the greatest devotion and loyalty. The period begins with the first sight of the new moon of the month or if the day be overclouded and the moon invisible, on the completion of the thirty days from the previous moon. Each day's fasting must begin so soon as daybreak permits a white thread to be discerned from a black thread and it continues till sunset.

Buddhist Festival—*Full Moon of Vaisakha*—is the thrice sacred day in the Buddhist calendar. On this day, under the spreading emerald canopy of the *Sal* tree in the beautiful gardens of Lumbini was born of queen Maya, Prince Siddharta, the Buddha to be. It was on another Vaisak Purnima day, when Tathagata attained "Bodhi" or enlightenment under a Bodhi Tree at Gaya. On a third Vaisak Purnima eighty years after the first that Buddha attained Mahaparinirvan in Kosi.

Ashada Purnima—is in commemoration of the first sermon of the Buddha attained Mahaparinirvan in Kosi.

Vas Pavarana—(End of rainy season lent) is held in October.

ASTRONOMICAL DATA

SOLAR SYSTEM—By the solar system, we mean the earth and other eight planets and their moons or satellites. They are the sun's family, rotating in a regular course about the sun, just as moon goes round the earth. The sun holds his family in place by the force of gravitation. The planets have no light of their own. When we see a planet, we are really seeing the reflected light of the sun's rays. The nine planets of the solar system in order of their distance from the sun are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune and Pluto.

Table of Planets

	Mean Distance (mills. of m. from sun)	*Period of sidereal revolution in years*	*Mean diam in miles*	*Axial rotation* (Sidereal)
Mercury	36·0	0·24	3,000	88 days
Venus	67·0	0·62	7,600	225 days
Earth	92·9	1·00	7,927	23 h. 56 m.
Mars	141·6	1·88	4,200	24 h. 37 m. 23 s.
Jupiter	483·3	11·86	88,700	9 h. 55 m.
Saturn	886·0	29·46	75,100	10 h. 14 m.
Uranus	1782·8	84·02	30,900	C11 h.
Neptune	2793·5	164·8	33,000	C16 h.
Pluto	C3700	24·8	C3,650	.. ..

SUN—There are countless millions of far distant self-luminous gaseous bodies called stars and each one is in itself a sun. Our sun is at a mean distance of 93,003,000 miles from the Earth, has a diameter of 865,390 miles, a surface temperature of about 11,000°F. It has a surface area aproximately 12,000 times that of the earth and in volume or bulk it is about 1,306,000 times the size of the earth. By the force of its gravitational attraction, the Sun keeps the planets in their regular orbits and pulls them with it through space at the rate of about 12 miles per second.

EARTH—The circumference of the Earth is 25,000 miles at the equator. Though the earth appears to us stationary, it is in fact spinning round on its axis once in every 24 hours and it spins from west to east. Besides spinning on its axis, the earth moves round the Sun. The path of the earth round the Sun called its orbit is not a circle but an oval or ellipse and the plane in which the Earth moves is said to be Plane of the Ecliptic. The time taken to complete one revolution round the sun is one year *i.e.*, 365¼ days approximately. The seasons are due to the changes of the Earth's position in the course of its revolution about the Sun and to the inclination of its axis.

MOON—is the only satellite of the earth, from which her mean distance is 2,39,000 miles, occupies an average period, in her revolution round the earth of 29 days, 12 hours, 44 minutes, 5 seconds; her diameter is 2,160 miles with a surface deeply pitted by great craters. It has no atmosphere, and it shines entirely by reflected light of the Sun.

Moon causes *Tides* by drawing the sea after it as the earth spins. The highest tides called spring tides, occur when attractions of the Sun and the Moon act in unison. The Moon being closer to the earth than Sun has the stronger attraction or pulling power, but Sun pulls the water also. It is when they pull together in the same direction that the highest tides occur (on New and Full moon days). The longest or neap tides occur when lines joining the Sun and Moon to the Earth are at right angles to one another.

OTHER PLANETS—*Mercury* is the smallest planet and is the nearest to the sun and it is less than half the earth's size. Its period of revolution around the Sun is 88 days ; *Venus* has no satellite, but is otherwise much like the earth in size and mass and in having atmosphere. It is the brightest planet. Its period of revolution around the Sun is 225 days. *Mars* comes closer to the earth than any other major planet at a time suitable for observation—within 35,000,000 miles at its nearest point. In period of revolution around the Sun is approximately 686 days. It is the planet which scientists believe is the most likely to have animal life. *Jupiter* is the largest of nine planets revolving around the Sun in about 12 years. Jupiter has at least nine satellites or moons. *Saturn*, a fluid and probably gaseous body takes almost 30 years to revolve around the Sun. Saturn is encircled by three transparent rings with thickness of between 20 and 40 miles. Like Jupiter, Saturn has at least nine satellites. *Uranus* with its four moons discovered by Sir William Herschel in 1781 takes 84 years to revolve around the Sun. *Neptune* was discovered in 1845. Its period of revolution around the Sun is almost 165 years. It has one satellite. *Pluto*, the most distant known planet of the solar system was discovered in 1930. It takes 248 years to revolve around the Sun.

ASTEROIDS—are also called minor planets. They are of small bodies which revolve round the sun in orbits lying between those of Mars and Jupiter. About 2,000 have already been recorded. The largest is Ceres, 485 miles in diameter. Some of these celestial bodies are perhaps nothing more than great masses of rock flying round the sun.

COMETS—They are occasional visitors to the sun's family, outside the planets and their moons. These are called comets, large masses of small particles and gases. They have long tails, and look like flaming snakes hurtling through the sky. Comets are of varying sizes but average diameter of the heads of a large number of observed comets is about 80,000 miles and the tail length may stretch out to more than 100,000,000 miles. A curious thing about comets is that their tails always trail from the head in a direction away from the Sun, so that when a comet is moving away from the Sun, the tail stretches out in front of the head. A few comets travel in hyperbolic orbits, never returning, but most comets return over a period of years. The most famous is *Halley's comet* which can be seen every seventy-five years.

METEORS—Meteors are masses of mineral or metal or both that plunge into earth's atmosphere at great speed and become incandescent from the resultant friction so that they are seen in the sky as fireballs or "shooting stars". The majority of meteors are burned up long before they strike the earth's surface and those which reach the ground are known as *meteorites*. The largest meteorite ever found is located near Grootfontein, south-west Africa which weighs between 50 and 70 tons. The second largest meteorite (weight 36¼ tons) was found at Cape York, Greenland.

CONSTELLATIONS—Group of fixed stars named after a mythological person, animal, etc. It must have been earliest observers, several thousand years B.C. who recorded that the 'fixed' stars are not scattered uniformly over the sky but appear to be grouped into figures, now named constellations. This confines us to stars visible to the naked eye, and also those of Milky Way. The constellations covering the whole celestial sphere are divided into three groups according to the regions in which they are seen—the Northern, the Southern and the Zodiacal.

SATELLITES—The secondary bodies which revolve around the planets, as the planets revolve around the sun, are called satellites. With the exception of Mercury and Venus, all of the planets are accompanied by one or more satellites. Earth has one satellite, moon ; Mars has two ; Jupiter nine ; Saturn, ten ; Uranus, four ; and Neptune, one.

STARS—are luminous heavenly bodies, so far distant from the solar system that the light from the nearest star travelling at the speed of 186,000 miles per second, takes four years to reach the earth. Unlike the planets, the stars shine by their own light. The total number of stars is probably in the neighbourhood of three to four billion ; of this number 6,000 are visible without the aid of telescope. The stars 'twinkle' as we gaze at them. This twinkling is caused by refraction through the earth's atmosphere.

POLAR AURORAS—The *Aurora Borealis* (northern lights) and *Aurora Australis* (southern lights) are luminous atmospheric phenomena which occur in the Arctic and Antarctic regions respectively. The auroras are now directly attributed to sun-spots. Sun-spots are magnetic storms of great dimensions on the surface of the Sun and they shoot out electrified particles into space. Those that come towards the Earth are drawn towards the Earth's magnetic poles and consequently these magnetic poles are the radiating centres of those spectacular electro-magnetic displays in the sky known as *Northern Lights* or *Southern Lights*. The electrical particles from the sun-spots strike the upper regions of our atmosphere where the component gases are very much rarefied and cause them to vibrate and glow when an electric charge is passed through it. There are indefinite variety of aurora display. Lights sweep across the sky in waves, in streamers and in folds like draped curtains or as stationary glow. The lights are red or green or pastel shades.

MILKY WAY—*Milky Way* is a hazy, somewhat irregular band of light about 20″ wide which completely encircles the heavens. It is seen on clear, moonless, summer evenings stretching entirely across the northern sky.

ATMOSPHERE—The atmosphere is composed of air which surrounds or envelopes the whole earth. It is sometimes likened to a great sea of gases, at the bottom of which we live. This air which surrounds the globe affects the light that comes to us from heavenly bodies. It refracts (bends or changes the direction) light rays that enter it. Due to this refraction, we see the Sun and the Moon before they rise and after they set. The 'twinkling' of the stars is caused by convection currents in the air that have rapidly changing refractive effect on the light from the stars. Our twilight is produced by the diffusion in the atmosphere of light from the Sun when it is below the horizon. Chemically the atmosphere is composed of nitrogen, oxygen and extremely minor amounts of argon, neon, helium, hydrogen and carbon dioxide.

ANTHROPOLOGICAL INFORMATION

RACES OF MANKIND

RACE "A SOCIAL MYTH"—The United Nations Educational, Social, and Cultural Organization has published on 18th July, 1950 a statement setting forth the conclusions of an international panel of scientists formed by UNESCO to define the concept of race and to summarize the most recent findings in this field which the world's biologists, geneticists, psychologists, sociologists, and anthropologists agree, are established scientific facts.

The main points of the conclusions are :—

(1) Racial discrimination has no scientific foundation in biological fact. There is no proof that the groups of mankind differ in intelligence, temperament, or other innate mental characteristics.

(2) The range of mental capacities in all races is much the same.

(3) Extensive study yields no evidence that race mixture produces biologically bad results. The social results of race mixtures are to be traced to social factors. There is no biological justification for prohibiting inter-marriage between persons of different ethnic groups.

(4) Race is less a biological fact than a social myth. As a myth it has in recent years taken a heavy toll in human lives and suffering and still keeps millions of persons from normal development, and civilization from the full use of the co-operation of productive minds.

(5) But, scientifically, no large modern national or religious group is a race. Nor are people who speak a single language, or live in a single geographical area, or share in a single cultural community necessarily a race.

(6) Tests have shown essential similarity in mental characters among all human racial groups. Given similar degrees of cultural opportunity to realize their potentialities, the average achievement of the members of each ethnic group is about the same.

(7) All human beings possess educability and adaptability, the traits which more than all others have permitted the development of men's mental capacities.

HOMO SAPIENS—We now give general classification of human race as is prevalent now a days. Classification of human into groups called '*races*' rests upon the basic fact that all peoples belong to the same genus and species, *Homo Sapiens*. It implies that all peoples are much more alike than different.

METHOD OF CLASSIFICATION—Scientists classify man by using number of physical traits, most of them based upon observation rather than upon precise measurement, such as stature, head-form, skin colour, hair colour, form and texture, eye colour, nose shape, mouth form, shape of face with special reference of cheekbones, arm and leg proportions, etc.

Two things are noteworthy—(1) most of the physical traits are external, (2) physical traits are so variable that a single trait has virtually no diagnostic value. So "race" is defined simply as a subgroup of mankind more or less set apart by a combination of physical traits.

(1) *Hair classification*—Some ethnologists divide mankind into three kinds—*Wooly hair, wavy hair, straight hair.*

(2) *Colour classification*—Some ethnologists divide mankind like this—*Whites, Yellow-Brown* and *Blacks.*

(3) *Group classification*—The human family has been divided into three or possibly four great aggregates of races to usually called *stocks* :—*Caucasian, Mongolian, Negroid* and *Australoid.* First three are often referred to as 'White', 'Yellow' and 'Black'. This is not really correct ; peoples of North-Central India are caucasoids, yet their skin colour is brown to dark brown. Variability also may be seen in stature : the tallest people in the world are found in Denmark and Scottish Highlands, in East Africa and in southernmost South America—respectively Caucasoid, Negroid and Mongoloid.

The Caucasian or Indo-European Race (White) comprises the Persians, Jews, Arabians, Hindus, Afghans, and the people of Northern Africa ; also the descendants of Europeans in America, South Africa, Australia, peoples of Europe, the adjacent shores of North Africa, and of Asia Minor, and India. The following races also belong to Caucasian stock—Nordic or northwest European, Alpine or Central European, Mediterranean or south-west European, Baltic or northeast European. Dinaric or southeast European, Armenoid in western Asia Minor. These races are not, of course absolutely limited to those geographical areas.

The Mongolian Race (Yellow) is basically the peoples of Asia, but are also in the western hemisphere as the American Indians and are represented in Malaysia and in Oceania. The Mongoloids are usually divided into the following races ; Senic of China and Japan, Palearctic of Siberia, Turkic and Tungic or Mongolic of Central Asia and Malayan of Malaysia. In the Western Hemisphere, they are found as Eskimos and the Indians of the Americans. In Polynesia *i.e.*, in Samoa, Tonga, Hawaii, the Mongoloid stock is a basic element with Caucasoid and some Negroid admixture.

The Negro Race (Black) is characterised by a broad and flat nose, thick lips, straight eyes, protruding jaw, kinkly hair, and dark skin varying in degrees of brownness and is composed of the natives of Africa and Oceania. They are chiefly found in West Africa, Sudan in Central Africa etc., and in Borneo, Solomons, Hebrides and Fiji.

Australoids are found in Australia as Australian aboriginals and in Japan as the Ainu. They may possibly be an element in Melanesia and in Ceylon and S. India *i.e.*, Toda, the Vedda and other tribes.

Myth of pure Races—From the above observations, it is conclusively proved that (1) there are no pure races (2) there are no superior or inferior races. We know from history that all peoples upon contact, have crossed their genetically based physical traits. We know from human anotomy that in fundamental structure all peoples are identical. As for biological Man is concerned, what he is, is related to his cultural environment, rather than to any innate ability or aptitude.

STAGES OF CIVILISATION OF MAN

The terms employed refer to periods, not of time but of culture and are of local application only—it is not universal in all parts of the world.

Stone Age—Age of human development in which primitive man was using stone implements and weapons. The Stone Age preceded the ages of bronze and iron. It is usually divided into four periods —(1) *Aolithic* or dawn of the stone age which lasted 6,000,000 years B.C.; (2) *Paleolithic*, or old stone age lasting perhaps 400,000 to 100,000 B.C. in which weapons and sharp stone tools were made from hard stone (flint) by chipping; (3) *Mesolithic*, a traditional period intermediate between the old and new stone ages, lasting perhaps until 10,000 B.C. when arrow and spear-heads were made and (4) the *Neolithic* or New stone age in which tools were perfected by grinding and polishing the stone. The new stone age lasted in Europe for some 5,000 years. In different parts of the world, the stone age existed at different times. Fire was probably discovered some 60,000 years before Christ.

Bronze Age—The period when early man used bronze for his tools and weapons, this superseding the use of stone. Its date differs in various areas. In the East it began probably about 5,000 B.C. and in the West perhaps 2,000 B.C. and continued until about 1,000 B.C.

Iron Age—The cultural phase of human civilisation marked by the use of iron specially for edged tools and weapons. In Europe and West Asia it usually followed the copper-using or bronze-using phase or age; in Africa it directly succeeded the stone-age. In Europe, iron working became general in the Mediterranean region about 1,000 B.C. subsequently two pre-Christian periods occurred, each of about 500 years.

PRE-HISTORIC RACES

Pithecanthropos erectus (erect ape-man or Java man)—This is generally believed to be the earliest manlike animal. Held to be a creature of pleistocene time about mid-way between the orang-utan and man, (1891-1892).

Sinanthropos pekinensis (Peking man)—Of higher development than Java man, but of approximately same period. Fosilized remains of 10 individuals were found in a cave about 40 miles from Pekin between 1926 and 1930. The brain capacity is estimated to be about one-fourth larger than that of Java man.

Australopithecus Africanus (erect man-ape)—A skull was found in Cape Colony in 1925.

Homo Heidelbergensis (Heidelberg man)—Primitive man of pleistocene period discovered in Heidelberg, Germany (1907). The jaw-which are remarkably well-preserved, are unmistakably of human type.

Piltown skull (Eoanthropos or primitive man)—Primitive man of early palaeolitic times found in Piltdown, Sussex (1912).

Neanderthal Man—Oldest known dolichocephalic (long-headed) race in Europe, living about 50,000 years before Christian era. Human remains were first discovered in 1857 near Dusseldorf, Germany, in Neanderthal, after which this type of human beings has been named.

Homo primigenius—Of last palæolithic times from 35,000 to 15,000 B.C. (1895-1906).

Note—Figures in parenthesis denote years in which discoveries were made.

GEOGRAPHICAL INFORMATION

AREA OF THE CONTINENTS

	Sq. miles		*Sq. miles*
Antarctica ..	6,000,000	Europe ..	3,750,000
Africa ..	11,500,000	North America ..	8,300,000
Asia ..	17,000,000	South America ..	6,800,000
Oceania ..	4,000,000		

WORLD DIMENSIONS

	Miles		*Sq. miles*
Diameter of either Pole ..	7,899·99	Surface area ..	196,950,284
Diameter of equator	7,926·68	Water area ..	139,950,284
Mean diameter ..	7,819·00	Land area ..	57,000,000
Circ. of equator ..	24,902·37		

PRINCIPAL RIVERS

	Miles long		*Miles long*
Missouri-Mississippi (U.S.A.) ..	4,502	Mekong (Asia) ..	2,800
Amazon (S.A.) ..	4,194	Obe (Asia) ..	2,700
Nile (Africa) ..	3,600	Niger (Africa) ..	2,600
Yangtse (Asia) ..	3,400	Hoang-Ho (Asia) ..	2,600
Yenesei (Asia) ..	3,300	Amur (Asia) ..	2,500
Congo (Africa) ..	3,000	Mackenzie (Canada) ..	2,514
Lena (Asia) ..	2,800	Volga (Europe) ..	2,450
		Yokon ..	2,000

OCEANS

	Area (sq. m.)	*Greatest known depth (ft.)*	*Place of greatest known depth*
Pacific Ocean ..	63,986,000	35,410	off Mindanao
Atlantic Ocean ..	31,530,000	30,143	Puerto Rico Trench
Indian Ocean ..	28,350,000	22,968	Sumatra, Java
Arctic Ocean ..	5,541,600	17,850	77° 45′N ; 175°W

HIGHEST MOUNTAIN PEAKS

	Range	*height in ft.*		*Range*	*height in ft.*
Everest	Himalayas	29,002	Illampu	Andes	21,500
Godwin-Austen (K2)	Do.	28,250	Chimborozo	Do.	20,498
Kanchanjanga	Do.	28,146	McKinley	Alaska	20,300
Nanga Parvat	Do.	26,629	Mount Logan	Rockies	19,850
Nanda Devi	Do.	25,645	Cotopaxi	Andes	19,612
Kamet	Do.	25,447	Kilimanjaro	Tanganaika	19,921
Aconcagua	Andes	22,976	Demevand	Iran	18,600
			Elburz	Caucasus	18,526

HIGHEST & LOWEST ELEVATIONS OF THE WORLD

	Highest (ft.)	*Lowest*
World & Asia—Mt. Everest ..	29,001	Dead Sea (Asia)—1,290 ft. below sea level
Africa—Mt. Kilimanjaro ..	19,565	Qattara Depression (Egypt) 440 ft. below Sea level
N. America—Mt. Mckinley ..	20,300	Death Valley, California 275 ft. below Sea level
S. America—Mt. Aconcagua ..	22,835	sea level
Antarctica—Mt. Thorvald Nelson ..	15,400	Sea level.
Europe (*Ex. U.S.S.R.*)—Mt. Blanc ..	15,781	Sea level
Australia—Mt. Kosciusco ..	7,328	Lake Eyre, 38 ft. below sea level
Oceania—Mauna Kea ..	13,784	Sea level
U.S.S.R.—Mt. Pobedy ..	24,409	Caspion Sea, 86 ft. below sea level

LARGE LAKES

	Area Sq. Miles		*Area Sq. Miles*
Caspian Sea (U.S.S.R. Iran) ..	170,000	Nayasa (Africa) ..	20,000
Superior (U.S.-Canada)	31,820	Tanganyika (Cen. Africa) ..	12,700
Victoria Nyanza (East Africa) ..	26,640	Baikal (S. Siberia) ..	12,150
Aral (Asiatic Russia)	24,600	Great Bear Lake (Canada) ..	12,000
Huron (U.S.-Canada)	23,010	Great Slave Lake (Canada) ..	11,170
Michigan (U.S.A.) ..	22,400	Erie (U.S.-Canada) ..	9,940
Chad (Africa) ..	20,000	Winnipeg (Canada) ..	9,398

VOLCANOES

	feet		*feet*
Cotopaxi, *Equador* ..	19,344	Mauna Kea, *Hawaii* ..	13,784
Mauna Loa, *Hawaii*	13,675	Vesuvius, *Italy* ..	3,858
Fujiyama, *Japan* ..	12,385	Stromboli, *Lipari Isles*	3,000
Etna, *Sicily* ..	10,741	Popocatepel, *Mexico*	17,883
Hualalai, *Hawaii* ..	8,269	Kilauea, *Hawaii* ..	4,090
Sangay, *Equador* ..	17,749	Hekla, *Iceland* ..	4,747
Mauna Loa, *Hawaii* ..	13,680		

LARGE ISLANDS

	Sq. Miles		*Sq. miles*
Greenland, *N. Atlantic*	839,782	North Island, N. Z. ..	44,281
New Guinea, *Pacific* ..	312,329	Cuba, *Atlantic* ..	42,734
Borneo, *Pacific* ..	290,285	Newfoundland, *Altantic* ..	42,734
Baffinland, *Arctic* ..	231,000	Luzon (Philippines), *Pacific*	40,814
Madagascar, *Indian* ..	228,589	Iceland, *Atlantic* ..	39,688
Sumatra, *Indian* ..	163,145	Mindanao, *Philippines*	36,906
Honshu (Japan), *Pacific*	91,278	Ireland, *Atlantic* ..	31,840
Great Britain, *Atlantic*	88,133	Tasmania, *South of Australia* ..	26,215
Victoria, *Arctic Ocean*	80,450	Ceylon, *Indian Ocean*	25,400
Celebes, *Indian* ..	69,255		
South Island, N. Z. ..	58,093		
Java, *Indian Ocean* ..	48,504		

PRINCIPAL DESERTS

	Sq. Miles		*M. long*
Gobi (*Mongolia, Asia*)	300,000	Ataacma (*North Chile*)	400
Sahara (*Africa*) ..	3,500,000	Talka Makan (*S. Central Sinking in Tarim Basin*) ..	700
Kalahari (*South Africa*) ..	120,000	Great Arabian (*most of Arabia*) ..	1,500
Libyan (*East portion of Sahara west of Nile*) ..	500,000	Thar (*India*)	300 m. by 380 m.
Kizil Kum (*Central Turkistan south-east of Lake Aral*) ..	70,000	Great Australian	About half of the continent.
Kara Kum (*Central Turkistan south-east of Lake Aral*) ..	110,000	Nubian	Red Sea to Great West bend of Nile.

GEOGRAPHICAL SURNAMES

Island of pearls—Bahrein (Persian Gulf).

World's lonliest island—Tristan De Cunha (Mid-Atlantic).

Roof of the World—Pamir Plateau.

Eternal City—Rome.

Gift of the Nile—Egypt.

Land of the Midnight Sun—Norway.

Land of Morning Calm—Korea.

Hermit Kingdom—Korea.

Geographical Surnames—*Concld.*

Holy Land—Palestine.
Island of Cloves—Zanzibar.
Land of White Elephant—Siam.
Empire City—New York.
Pillars of Hercules—Strait of Gibraltar.
Key of the Mediterranean—Gibraltar.
Rose-pink City—Jaipur.
Whiteman's grave—Guinea coast of Africa.
Sugar bowl of the world—Cuba.
Windy City—Chicago.
Blue Mountains—Nilgiri Hills.
Venice of the North—Stockholm.
Forbidden City—Lhasa.
Land of Cakes—Scotland.
China's Sorrow—Hoang Ho.
Gate of tears—Strait of Bab-el-Mandeb.
Pearl of the Antilles—Cuba.
The Corridor—A strip of land in Poland separating Germany from East Prussia.
Granite City—Aberdeen.
Playground of Europe—Switzerland.
City of Seven Hills—Rome.
Land of Rising Sun—Japan.
Dark Continent—Africa.
Emerald Isle—Ireland.
Land of Maple—Canada.
Land of Five Rivers—The Punjab.
Gateway of India—Bombay.
City of Palaces—Calcutta.
Land of Golden Fleece—Australia.
City of Sky-Scrapers—New York.
Cockpit of Europe—The Balkans.
Land of Thousand Lakes—Finland.
City of Magnificent Distances—Washington D.C.
Bengal's sorrow—Damodar.
Never Never land—Vast prairies of northern Australia.
Queen of the Adriatic—Venice.
The Down Under—Australia.

LONGEST TUNNELS

	Miles
Tanna, *Japan* ..	13½
Simplon, *Swiss-Italian Frontier* ..	12¼
Appennines ..	11½
Loetschbeg, *Switzerland* ..	9¼
St. Gothard, *Swiss-Italian Frontier* ..	9⅛
Mont Cenis, *France* ..	8
Arlberg, *Tyrol* ..	6½

MOUNTAIN PASSES

	Altitude (feet)
Alpine (Colorado, U.S.A.) ..	13,550
Bolan (Baluchistan) ..	5,880
Brenner (Austrian Alps)	4,588
Khybar (Afghanistan)	3,373
St. Bernard (Swiss Alps) ..	8,100
St. Gotthard (Swiss Alps) ..	6936
Shipka (Bulgaria) ..	4,300
Simplon (Swiss Alps) ..	6,595

FAMOUS CAVES AND CAVERNS

Mamoth Cave (Kentucky, U.S.) 4 m. long 125 ft. high.
Caverns of Adelsburg (Trieste).
Carlsbad Caverns, S. W. New Mexico.

Cheddar Cave (Somerset).
Fingal's Cave (Scotland).
Blue Grotto (Island of Capri, Italy).

FAMOUS SHIP CANALS

	Length (mi.)	*Width (ft.)*	*Depth (ft.)*
Albert (Belgium) 1939 ..	80·0	53·0	16·5
Amsterdam-Rhine (Netherlands) 1952	45·0	164·0	41·0
Beaumont-Port Arthur (U.S.) 1916	40·0	200·0	34·0
Chesapeaki & Delaware (U.S.) 1927	19·0	250·0	27·0
Houston (U.S.) 1914 ..	50·0	200·0	33·0
Keil (Germany) 1895 ...	53·3	144·0	37·0
Panama (Canal Zone) 1914 ..	50·0	110·0	41·0
Sault Ste Marie (Canada) 1895 ..	1·2	60·0	16·8
Sault Ste Marie (U.S.) 1915 ..	1·6	80·0	25·0
Suez (Egypt) 1869 ..	87·5	197·0	34·0
Welland (Canada) 1931 ..	27·6	80·0	25·0

PRINCIPAL SHIP CANALS

	Opened year	*miles*		*Opened year*	*miles*
Amsterdam (*Netherlands*) ..	1876	16½	Princes Juliana (*Netherlands*) ..	1935	20
Corinth (*Greece*) ..	1893	4	Saulte Ste. Marie (*U.S.A.*) ..	1855	1½
Elbe & Trave (*Ger.*)	1900	42	Saulte Ste. Marie (*Canada*) ..	1895	1
Gotta (*Sweden*) ..	1832	115	Suez (*Egypt*) ...	1869	100
Kiel (*Germany*) ..	1895	61	Welland (*Canada*)	1887	25
Manchester (*Eng.*)	1894	35¼			
Panama (*U.S.A.*)	1914	50½			

GEOGRAPHICAL RECORD-BREAKERS

Highest Mountain System	Himalayas.
Longest Mountain System	Andes.
Highest Plateau ..	Tibet.
Longest River ..	Mississippi-Missouri, 4,502 miles long.
Largest River (in volume)	Amazon.
Largest River Basin ..	Basin of Amazon, 2,720,800 sq. miles.
Largest Salt Water Lake	Caspian Sea.
Largest Fresh Water Lake	Superior.
Largest group of Islands	Malaya Archipelago.
Largest Artifical Lake ..	Lake Mead at Boulder Dam (U.S.A.).
Largest north to south stretch of land ..	America : N. and S. extend from Arctic to the Antarctic Ocean.
Largest inland sea ..	Mediterranean Sea.
Largest ship canal ..	Baltic White Sea Canal, 152 miles long.
Deepest Ocean ..	Pacific Ocean.

Highest Auto Road	Mount Evans Highway (Colorado, U.S.A.)
Highest Capital City	La Paz (Bolivia)
Largest Island	Greenland, 846,740 sq. miles.
Densest population	Monaco (33,898 per sq. m.)
Hottest Region	North-west Sahara, Azizia (Tripolitania), Death Valley (California), and Thar Desert of North-west India.
Coldest Regions	Verkoyansk in North-East Siberia where temperature is 90° below zero.
Largest Continent	Asia.
Largest Peninsula	India.
Highest Country	Tibet.
Biggest Ocean	Pacific Ocean.
Most northerly Town	Hemmerfest, Norway, 275 miles north of Arctic circles.
Largest Desert	Sahara (Africa).
Largest City	London (Population, 8,346,000).
Highest Peak	Mt. Everest (29,002 ft.).
Densely Populated Country	China.
Rainiest Place	Cherrapunji (Assam).
Largest Volcano	Mauna Loa (crater 12,400 ft.), Largest Volcanic Mt. in cubic content.
Highest Volcano	Chimborazo S. America, (20,702 ft.).
Smallest Continent	Australia.
Deepest Lake	Lake Baikal (Siberia).
Highest Lake	Lake Titicaca (Bolivia, 12,000 ft. above sea).
Saltiest Sea	Dead Sea.
Smallest Independent State	Vatican City (109 acres).
Largest State	U.S.S.R.
Largest Delta	Sundarban delta (8,000 sq. miles).
Longest Thoroughfare	Broadway, New York.
Highest City	Phari, Tibet, altitude 14,300 ft.
Largest coral formation	Great Barrier Reef, (Australia).
Lowest body of water	Dead Sea.
Deepest place in the ocean	Off the island of Mindanao, Philippines sounding of 35,400 ft. reached.

WORLD EXTREMES OF CLIMATE

Coldest Place—Verkoyansk (Siberian village)—90°F below zero.

Hottest Place—Azizia (Libya)—136°F (Sept. 13,1922) and Death Valley (California)—134°F. (July 10, 1913).

Minimum recorded Rainfall—·04 inch at Iquique, Chile—average yearly fall during 40 years.

Highest mean annual temperature—86°F at Massawa, Eritrea, Africa.

Lowest mean annual temperature—14°F at Framheim, Antarctica.

Maximum recorded rainfall—366 inches in one month at Cherrapunji, Assam, July, 1861. Average annual rainfall is 426 inches.

FAMOUS WATERFALLS

Name and location	Height ft.
Angel (Venezula)	3,300
Tugela (Natal, S. Africa)	2,810
Kukenaam (Br. Guinea—(S.A.)	2,000
Southerland (S. Island, N.Z.)	1,904
Ribbon (California)	1,612
Gavarnie (France)	1,385
Takkakaw (Br. Columbia)	1,200
Staubbach (Switzerland)	980
Trummelbach (Switzerland)	950
Middle Cascade (Cali)	910
Multnomach (U.S.A.)	850
Vettisfos (Norway)	850
King Edward VII (Br. Guinea)	840
Gersoppa (Mysore)	830
Kaieteur (Br. Guinea)	741
Kalambo (Tanganyika)	705
Fairly (America)	700
Maradalefos (Norway)	650
Skykkjefos (Norway)	650
Terni (Italy)	650

POLAR RECORDS

Arctic

Year	Explorer	No.	Latitude
1854	E. K. Kane (U.S.A.)	78°	45′
1871	Capt. Hall (U.S.A.)	82°	11′
1875	Capt. Nares (G.B.)	83°	20′
1882	Lieut. Greely (U.S.A.)	83°	24′
1892	Lieut. Peary (U.S.A.)	83°	27′
1895	Fridtjof Nansen (Norway)	86°	14′
1900	Duke d'Abruzzi (Italy)	86°	34′
1902	Lieut. Peary (U.S.A.)	84°	17′
1904	Zeigler Polar Expedition (U.S.A.)	82°	4′
1906	Commander Peary (U.S.A.)	87°	6′
1909	Commander Peary (U.S.A.)	90° (Pole)	..
1926	Commander Byrd (U.S.A.)*	90° (Pole)	..
1926	Amundsen-Ellsworth-Nobile†	90° (Pole)	..
1928	Gen. U. Nobile † (Italy)	90° (Pole)	..
1937	Pavel Golvin. (*Soviet Russia*)*	90° (Pole)	..
1937	Prof. Otto J. Schmidt and four others* (Soviet Russia)	90° (Pole)	..

Antarctic

Year	Explorer	No.	Latitude
1774	Capt. Cook (G.B.)	71°	10′
1823	Capt. Weddell (G.B.)	74°	15′
1842	Capt. Rose (G.B.)	78°	10′
1900	Borchgrevink (G.B.)	78°	50′
1902	Capt. Robert F. Scott (G.B.)	82°	17′
1909	Lieut. Shackleton (G.B.)	88°	23′

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* By airplane.

† By airship.

1911	Roald Amundsen (Norway)	90° (Pole)	..
1912	Capt. Robert F. Scott (G.B.)	90° (Pole)	..
1929	Adml. Richard Byrd* (U.S.A.)	90° (Pole)	..
1935	L. Ellsworth* (U.S.A.)	76-79	58
1947	Adml. Richard Byrd* (U.S.A.)	90 (Pole)	..

NATURAL WONDERS OF THE WORLD

Volcanoes—The two largest volcanoes in the world are in Equador in South America: *Chimborazo*, 20,702 ft. and *Cotapaxi*, 19,344 ft.

Geysers—The greatest development of Geysers is in Iceland, New Zealand and Yellowstone National Park, Wyoming, U.S.A. The most famout gayser of Yellowstone Park is *Old Faithful* which spouts a column of water 140 ft. regularly every 63 minutes. There are altogether 120 named geysers in Yellowstone.

Waterfalls—Highest waterfall in the world is *Angel* in Venezuela which has a total height of 3,300 ft. The second largest waterfall in the world is *Tugela* 2,810 ft. in Br. Guinea in northern South America.

Canyons—The most impressive canyon in the world is *Grand Canyon* of the Colorado River, U.S.A. and extends for 217 miles with a width on the rim from 4 to 18 miles. The canyon reaches a maximum depth of about 5,500 feet below the surrounding plateau.

Caverns—*Mammoth Cave*, the largest underground caven in the world is located in central Kentucky, U.S.A. and it extends for 10 miles with 150 miles of connected passages. *Blue Grotto*—on the island of Capri, Italy is a famous cavern hollowed out in limestone by constant wave action. Name is derived from the unusual blue light permeating the cave.

Glaciers—The principal glacial areas are in the Antarctic, Greenland, nearly all the high mountain ranges and many of the islands in the Arctic region. The largest glaciers in the world are found in Greenland and the Arctic as well as Antarctic regions.

Deserts—Largest desert is the *Sahara* in northern Africa covering an area of about 3,000,000 sq. m. and reaching a maximum altitude of 9,000 feet above the sea level.

Mountains—The loftiest peak in the world is *Mount Everest*, 29,002 ft. in height in Himalaya mountains in Nepal.

Lakes—*Lake Superior* is the largest fresh water lake in the world. *Lake Victoria* (Africa) is the second largest lake in the world.

Oceans—*Pacific Ocean* is the largest single body of water on the surface of the globe and reaches the maximum depth of 35,410 ft. near the Island of Mindanao in the Philippines.

Gulf Stream—is a warm ocean current that originates near the Gulf of Mexico and flows north along the eastern coast of United States, then across the Atlantic Ocean, passing near Great Britain and the Scandinavian Peninsula and ending in the Arctic Ocean. Japanese current is the 'gulf stream' of the Pacific Ocean having its origin in the China Sea. This stream becomes the California Current and warms the north-western shares of the United States.

FAMOUS STRUCTURES OF THE WORLD

Pyramids of Egypt—Located on the west bank of the Nile River and extends for about 60 miles south of Gizeh, they were built during the period from 3500 B.C. to 18 B.C. to contain tombs of Pharaohs. The largest of the pyramids erected by the Cheops rises 450 ft. above the desert. It is 746 ft. square at the base and occupies almost 13 acres.

Great Sphinx of Egypt—A stone image of a crouching lion with a human head, at Gizeh in northern Egypt and carved about 3500 B.C. The total height of Sphinx is about 66 ft., its body is 189 ft. in length.

Mausoleum of Halicarnassus—A marble tomb built in 352 B.C. at Halicarnassus in Asia Minor by Queen Artemisia for her husband Mausolus. It was 140 ft. high. It was destroyed by earthquake between 12th and 15th centuries.

Hanging Gardens of Babylon—Terraced gardens planted by King Nebuchadnezzar about 655 B.C. in Bagdad in Iraq.

Statue of Zeus at Olympia—A statue carved by Phidias in the 4th century B.C. It was placed in the temple of Olympus in south-western Greece where all who attended the Olympic games might pay homage to Zeus, King of the Greek deities.

Alhambra—A group of buildings erected chiefly between 1948 and 1354 by the Moorish King Al Ahmar and his successors on a hill above Granada in southern Spain. It is claimed to be the crowning achievement of the Moors in Spain.

Pantheon—At Rome was built in 27 B.C. It was used as temple. Literally *Pantheon* was intended as a temple of "all the Gods".

Temple of Diana at Ephesus—A monument of brightly coloured marble, designed by Stesiphon and built by the Ionians in the 5th centry B.C. at the now-vanished city of Ephesus, south of Smyrna in western Asia Minor. The temple was 425 ft. in length and 225 ft. wide. It was burnt in 356 B.C.

Porcelain Tower of Nankin—An eightsided pagoda 261 feet in height erected in the 15th century by a Chinese King in eastern China. It contained eight or nine stories. It was destroyed in 1853.

Leaning Tower of Pisa—A round white marble bell-tower at Pisa, Italy and containing eight stories enclosed by columns. The tower leans about 14 feet out of the perpendicular, its height being 181 feet on the north side and 179 feet on the south side. It was built in 1350.

Stonehenge—A monument of huge stones forming three circles, supposed to be erected by a Celtic race of sun-worshippers 4,000 years ago at Salisbury Plain 90 miles from London.

Parthenon of Greece—built on the Acropolis in Athens, was the chief temple to the goddess Athena. It was believed to have been completed by 438 B.C. Though the Parthenon is in ruins, its majectic proportions are still discernible.

Great Wall of China—A wall of about 1,400 miles long extending along the boundary between northern China and Mongolia. It was begun in the 3rd century.

Great Buddhist Temple of Java—A monument of Buddhist architecture, known as *Boro Budor* and built of volcanic lava in the 9th or 8th century in Java. It shows architecture and sculpture of grandeur.

Acropolis at Athens—A hill about 260 feet in height located in south-eastern Greece. At the summit are ruins of numerous temples originally enclosed by Doric and Ionic columns and built of marble by Pericles and Cimon in the 5th century B.C. The most notable of these structures include *Parthenon* which contained a gold and ivory statue of Athena.

St. Peter's at Rome—The largest Cathedral in the world covering an area of 18,000 square yards and located in Rome, Italy. It was completed in 1632. The Cathedral's greatest length is 636 feet, its height is 435 feet.

Mayan Temples—Buildings erected by the Mayan Indians who attained a high civilization before the birth of Christ. The temples, now in ruins were built on lofty pyramid-shaped terraces and were frequently ornamented with columns in the form of feathered snakes.

Mosque of Santa Sophia—A building located at Istanbul in northern Turkey and erected by Emperor Justinian in 6th century. The Turkish Sultan Mohammed II made the structure a mosque after conquering the city in 1453.

Colosseum of Rome—The largest and most famous of Roman amphitheatres, 1,680 feet in circumference located at Rome. The Colosseum could accommodate 80,000 spectators at a single performance and was 157 feet high containing an area 285 feet long and 182 feet wide. It was built in about 80 A.D.

Potala of Tibet—The fortress-palace of Dalai Lama, the ruler of Tibet. The structure is over 900 feet in length and resembles a fortress with many gilded roofs and towers at various levels—the highest being more than 400 feet from the ground.

Shawe Dagon Pagoda—A gilded bellshaped structure at Rangoon to contain eight hairs of Buddha. Its base is 1,355 feet in circumference and the top is encased with gold leaf supporting 1,500 little bells of silver and gold. It is 367 feet high.

Taj Mahal—A domed square mausoleum of white marble at Agra in India built during the period from 1630 to 1649 by Emperor Shah Jahan as a burial place for his wife Mumtaz Mahal. Tajmahal is the perfect gem of moslem art.

Colossus of Mysore—A statue of 60 feet in height representing Gomateswara, a saint of the Jain religion. It was carved in 983 A.D. from a solid rock on a hill top that rises 470 feet above a plain in the State of Mysore. The image is 26 feet broad at the shoulders and stands on a circular platform.

Angkor Vat—A structure 796 ft. long and 588 feet wide in a city in Cambodia, French Indo-China, comprising a royal city of 59 sq. miles area and temple Angkor Vat. Built in 9th century by the Khmers, the enclosed temples, palaces and public building of stone are completely covered with sculptured scenes which picture life of Khmer civilization now extinct. The largest of five pagoda rises 250 feet above foundations at the centre of the temple.

Empire State Building—in New York City is the tallest building of the world reaching a height of 1,250 ft. in 102 stories. The building was completed in 1931.

GENERAL INFORMATION

LONGEST RAILWAY STATION PLATFORMS

	feet		feet
Sone (India)	2,415	Perth (Scotland)	1,714
Kharagpur (India)	2,350	York (England)	1,704
Bulawayo (Rhodesia)	2,302	Cambridge (Eng.)	1,629
New Lucknow (India)	2,250	Edinburgh (Scotland)	1,608
Bezwada (India)	2,210	Aberdeen (Scotland)	1,596
		Trichinopoly (India)	1,546
Manchester Victoria Exchange (L.M.S.)	2,194	Ranaghat (India)	1,522
Jhansi (India)	2,025	Crewe (England)	1,509
Kotri (N.W.R., Pakistan)	1,896	Dakor (India)	1,470
		Victoria (England)	1,430
Mandalay (Burma Railways)	1,788	New Castle (England)	1,365
Bournemouth (England)	1,734	Bristol (England)	1,300

FAMOUS BRIDGES

Name	*Type*	*Length of channel span (feet)*
Golden Gate (U.S.A.)	Suspension	4,200
George Washington (U.S.A.)	Do.	3,500
Tacoma Narrows (U.S.A.)	Do.	2,310
Bronx-Whitestone (U.S.A.)	Do.	2,300
Delaware Memorial (U.S.A.	Do.	2,150
Ambassador (U.S.A.)	Do.	1,850
Quebec (U.S.A.)	Cantilever	1,800
Delaware River (U.S.A.)	Suspension	1,750
Forth (Scotland)	Cantilever	1,700
Kill Van Kull (U.S.A.)	Steel Arch	1,652
Sydney Harbour (Australia)	Steel Arch	1,650
Bear Mountain (U.S.A.)	Suspension	1,632
Chesapeake (U.S.A.)	Do.	1,600
Williamsburg (U.S.A.)	Do.	1,600
Brooklyn (U.S.A.)	Do.	1,595
Lions Gate (Canada)	Do.	1,590
Mid Hudson (U.S.A.)	Do.	1,500
Howrah (India)	Cantilever	1,500
Manhattan (U.S.A.)	Suspension	1,470
Transbay (U.S.A.)	Cantilever	1,400
Triborough (U.S.A.)	Suspension	1,580
St. Johns (U.S.A.)	Do.	1,207
Longview (U.S.A.)	Cantilever	1,200

NOTABLE TELESCOPES

REFRACTOR		
Size in inches	*Observatory*	*Location*
40	*Yerkes*	Williams Bay U.S.A.
36	*Lick*	Mt. Hamilton, California
32·7	*Univ. of Paris*	Meudon, France
31·5	*Astrophysical*	Postdam, Germany
30	*Alleghney*	Pittsburgh, U.S.A.
30	*Bischoffsheim*	Nice, France
30	*Poulkova*	Leningrad

REFLECTOR		
Size in inches	*Observatory*	*Location*
200	*Palomar*	Mt. Palomar California
100	*Mt. Wilson*	Pasadena, California
82	*McDonald*	Mt. Locke, U.S.A.
74	*Danlap*	Richmond Hill, Canada
72	*Dominion Astrophysical*	Victoria, B.C.
69	*Perkins*	Delaware, U.S.
61	*Harvard*	Oke Ridge, U.S.
60	*Bloemfontein*	S. Africa
60	*Mt. Wilson*	Pasadena, U.S.
60	*Cordoba*	Argentina

LIBRARIES OF THE WORLD

	Books	*Mss.*
British Museum	5,000,000	..
Bibliotheque Nationale (Paris)	5,000,000	130,000
State Library (Berlin)	1,500,000	..
State Library (Munich)	2,000,000	..
Deutsche Bucheri (Leipzig)	2,000,000	..
Nationalbliothek (Vienna)	1,400,000	..
Vatican Library (Vatican)	700,000	50,000
Biblioteca Nazionale (Naples)	1,400,000	11,000
Biblioteca Nazionale (Florence)	3,400,000	..
Biblioteca Nazionale (Rome)	1,940,000	..

	Books	*Mss.*
Bibliotheque Royale (Brussels)		2,000,000
Biblioteck Nacional (Madrid)		1,500,000
University Library (Amsterdam)		1,500,000
Royal Library (Stockholm)		700,000
Lenin State Library (Moscow)		11,000,000
Public Library (Leningrad)		6,000,000
Gosudarstvemava Public Library (Leningrad)		6,000,000
National Diet Library (Tokio)		3,000,000
Library of the Congress (Washington)		9,000,000
New York Public Library		475,000

LARGEST BELLS

	Approximate weight in tons		Approximate weight in tons
Great Bell at Moscow (*World's largest*)	200	St. Paul's London	17
Great Bell, Mingoon, Burma	125	Great Tombs', Oxford	17
Great Bell at Peking	55	Seus, France	13
Novgorod, Russia	31	Erfuz Cathedral, Prussian Saxony	13
Bell at Cologne Cathedral	26	Montreal (R. C. Cathedral)	13
St. Issac's Cathedral, Leningrad	22	York	12
Oulmutz, Austria	18	Big Ben, Westminster	12
Vienna	18	Gorlitz, Silesia	10
Notre Dame, Paris	18	Brugs	10

HIGH BUILDINGS AND TOWERS

	Feet		Feet
Empire State (N.Y.)	1,250	Irvine Trust (U.S.)	654
Chrysler (N. Y.)	1,046	General Electric (U.S.)	641
Eiffel Tower (Paris)	984	Waldorf-Astoria (N.Y.)	625
60 Wall Tower (N.Y.)	950	Ulm Cathedral (Germany)	529
Bank of Manhattan (N.Y.)	925	Cologne Cathedral (Ger.)	
R. C. A. Rockefeller Centre	850	Rouen Cathedral (France)	485
Woolworth (N.Y.)	792	Straussburg Cathedral (Germany)	468
Farmer's Trust, (N.Y.)	767	Pyramid of Cheops (Egypt)	450
Terminal Tower (U.S.A.)	708	St. Stephen's Cathedral (Vienna)	441
Metropolitan Building (N.Y.)	700		
Chanin Tower (U.S.)	680		
Lincoln (U.S.)	638		

WORLD FAMOUS DAMS

	Height in feet	Length in feet	Cubic yds. material in dam	Amount of water held (Billions of gallons)
Hoover (U.S.A.)	726*	1,244	3,251,000	10,543
Fort Peck (U.S.A.)	250	21,578	109,000,000	6,325
Cauvery-Muttur (India)	214	5,300	1,850,000	5,978
Grand Coulee (U.S.A.)	550	4,173	10,000,000	3,160
Kentucky (U.S.A.)	150	8,655	4,415,000	1,987
Denison (U.S.A.)	165	14,000	15,475,000	1,898
Wolf Creek (U.S.A.)	242	5,730	10,250,000	1,884
Shasta (U.S.A.)	602	3,500	6,000,000	1,466

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* Highest in the world.

Guntun (Canal Zone) ..	115	8,324	22,958,000	1,437
Aswan (Egypt) ..	174	6,985	1,732,306	1,322
Marshall Ford (U.S.A.) ..	270	2,623	3,581,000	1,016
Norris (U.S.A.) ..	265	1,860	1,150,000	836
Elephant Buttee (New Mexico) ..	301	1,162	605,200	859
Bagnell (U.S.A.) ..	148	2,543	551,000	749
Saluda (U.S.A.) ..	208	7,800	11,000,000	749
Hume (Australia) ..	180	5,300	4,000,000	651
Kingsley (U.S.A.) ..	162	10,200	26,000,000	651
American Fails (U.S.A.) ..	89	5,227	312,160	555
Sardis (U.S.A.) ..	117	14,550	16,842,000	508
Santee (U.S.) ..	45	41,200	9,622,000	437
Roosevelt (U.S.A.) ..	280	723	340,000	462
Dnieper (U.S.S.R.) ..	140	3,350	968,000	291
Coble Mountain (U.S.A.)	263	730	1,800,000	264

RESOURCES OF LEADING COUNTRIES

(Source : *United Nations Year-Book* 1951-52)

Coal

(*Millons of short tons*, 1951)

U.S. ..	575
U.S.S.R. ..	317
U.K. ..	249
Germany (Fed. Rep.) ..	131
Poland ..	89
France ..	76
Czechoslovakia	51
Japan ..	48
China ..	42
India ..	38

Manganese

(*Thousands of short tons*, 1950)

U.S.S.R. ..	2,200
U. of South Africa ..	870
Gold Coast ..	783
India ..	747
French Morocco ..	316
Brazil ..	179
Egypt ..	167
Japan ..	148

Silver

(*Millions of fine* Oz. 1950)

Mexico ..	49·1
U.S. ..	42·3
Canada ..	22·4
Peru ..	13·1
Australia ..	11·1
Bolivia ..	6·6
Belgian Congo	4·5
Honduras ..	4·1
Japan ..	3·7
Germany (Fed Rep.) ..	1·6

Iron Ore

Millons of short tons 1951)

U.S. ..	130·1
U.S.S.R. ..	44·0
France ..	38·7
Sweden ..	17·7
U.K. ..	16·4
Germany (Fed Rep.) ..	14·2
Luxemburgh	6·2
Canada ..	4·6
Chile ..	3·5
India (1950)	3·3

Gold

(*Thousands of fine oz.* 1950)

U. of South Africa ..	11,664
U.S.S.R. ..	7,000
Canada ..	4,431
U.S. ..	2,289
Australia ..	870
Gold Coast ..	680
Mexico ..	408
Colombia ..	379
Belgian Congo	339

Petroleum

(*Millions of* ℔. 1951)

U.S. ..	2,200
Venezucla ..	622
U.S.S.R. ..	301
Saudi Arabia	268
Kuwait ..	203
Iran ..	132
Mexico ..	79
Iraq ..	60
Indonesia ..	58
Canada ..	48

Cattle

(*Number in millons* 1951)

India	180·2
U.S.	84·2
U.S.S.R.	57·5
Brazil	46·4
Argentina	43·0
Pakistan	24·3
China	18·2
Etheopia	18·0
France	15·8
Colombia	15·5

Cotten, ginned

(*Thousands of bales*, 500 ℔. 1951)

U.S.S.R. (1950)	16,800
U.S.	15,290
India	2,800
Egypt	1,670
China (1949)	1,630
Brotsil	1,350
Mexico	1,330
Pakistan	1,290
Turkey	650
Argentina	500

Arable Land

(*Millions of acres*, 1952)

U.S.S.R.	556
U.S.	455
India	306
China	225
Belgian Congo	121
Canada	92
Argentia	74
France	52
Pakistan	52
Spain	47

Rice

(*Thousands of short tons* 1951-52)

China	49,500
India (1950-51)	35,000
Pakistan	13,870
Japan	12,500
Indonesia	10,850
Thailand	7,250
Malayan Fed	7,140
Indo-China	6,250
Burma	5,900
Brazil	3,300

Rubber

(*Thousands of short tons*, 1951)

U. S. synthetic only)	945
Indonesia	851
Malayan Fed	677
Ceylon	117
Canada (synthetic)	70
Indo-China	53
Sarawak	47
Liberia	40

Sheep

(*Number in millions*, 1950)

Australia (1951)	115·6
U.S.S.R. (1948)	64·8
Argentina (1957)	50·9
India	38·9
New-Zealand (1951)	34·8
U. of S. Africa (1949)	31·9
U. S.	31·5
Urugnay	23·0
Spain	23·0
Turkey	22·1

Wheat

(*Millions of bu.* 1951)

U.S.S.R. (1950)	1,110
U.S.	987
China (1949)	903
Canada	562
France	260
Italy	250
India	232
Turkey	206
Spain	176
Pakistan	148

Air lines

(*Millions of passenger miles, monthly average*, 1951)

U.S.	1,097
U.K.	90
Australia (1950)	66
France	65
Canada	57
Netherlands	46
Mexico	45
India	26
Colombia (1950)	16

Telephones

(*Number per* 100 *population*, 1951)

U.S.	28·1
Sweden	23·9
Canada	20·8
New Zealand	19·1
Switzerland	19·1
Denmark	16·9
Iceland	14·4
Australia	13·9
Norway (1952)	13·8
U.K.	10·7

Highest Birth rate, Annual

(*per* 1,000 *population*, 1951)

Mexico	44·6
China (not available)	..
India	27·1
Canada	27·1
Thailand (1949)	27·1
Japan	25·6
U.S.A.	24·3
Australia	23·3

Lowest death rates *(per 1,000 population,* 1951)	
Netherlands	7·6
Norway	8·3
Denmark	8·8
Canada	9·6
U. of S. Africa (whites only)	9·2
Australia	9·6
U.S.	9·7
Sweden	9·9
Japan	10·0

Armed Forces *(Army, Air, Navy in thousands,* 1951)	
U.S.S.R.	4,500
China	4,000
U.S.	3,250
U.K.	730
France	725
Yugoslavia	600
Turkey	500
Poland	500
India (1948)	450
Spain	450

Navies *(No. of Warships,* 1951)*	
U.S.	535
U.K.	140
U.S.S.R.	101
Spain	24
France	22
Sweden	20
Argentine	19
Canada	14
Australia	14
Brazil	12

BIGGEST, LARGEST, GREATEST, LONGEST

Highest Mountain peak	Mount Everest (29,002 ft.).
Largest Desert	Sahara (Africa) 3,000,000 sq. m.
Largest Palace	Vatican (Rome).
Biggest Ship	Queen Elizabeth (83,673 tons).
Largest Diamond Mine	Kimberly, South Africa.
Tallest Statue	Statue of Liberty (N.Y.) 151 ft. high.
Tallest Church	Ulm Cathedral (Germany, 529 ft. high).
Largest Church	Church of St. Peters (Rome).
Largest Diamond	The Cullinan.
Rainiest Place	Cherrapunji, Assam.
Biggest & Deepest Ocean	Pacific Ocean (64,000,000 sq. m.).
Longest Corridor	Rameswaram Temple Corridor, S. India. About 4,000 ft. long.
Longest Rly. Platform	Sonepur Station (Bihar).
Largest Pearl	Beresford-Hope Pearl, weighing 1,800 grams.
Longest railway run	Riga to Vladivostock (6,000 miles).
Largest Telescope	At Mt. Palomar, California, diameter of reflector is 200 inches.
Largest Museum	British Museum (London).
Longest River	Mississippi-Missouri.
Largest River (in vol.)	Amazon.
Largest Railway Station	Grand Central Terminal (New York) with 47 platforms.
Largest Dome	Gol Gumbaz (Bijapur) 144 ft. in actual diameter.
Largest Building	The Pyramid at Gizeh, Egypt.
Tallest Tower	Eiffel Tower, Paris, 984 ft. high.
Largest group of Islands	Malaya Archipelago.
Largest Delta	Sundarban Delta, 8,000 sq. m.
Largest Royal Palace	The Palace at Madrid.

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*Excluding submarines and frigates and escort types.

Biggest, Largest, Greatest, Longest—(*Concld.*)

Largest Single Country	Brazil with an area of 3,285,319 sq. miles.
Largest Freshwater Lake	Lake Superior.
Highest Lake	Lake Titicaca (South America), altitude 12,507 ft.
Largest Volcano	Chimborazo (20,702 ft.) Equador.
Largest & populous continent	Asia.
Longest Wall	The Great Wall of China over 1,500 miles.
Highest Auto Road	Colorado, U.S.A.
Highest Suspension Bridge	Royal Gorge, Colorado, U.S.A. 12,740 ft. high.
Highest Country	Tibet (Averaging 16,000 ft.).
Largest office building	Pentagon (U.S.A.) 34 acres, where 32,000 people work daily ; floor area, 6,000,000 ft. has 17 miles of corridor.
Longest Tunnel	Simplon (Switzerland) 12 m. 458 yds. long.
Highest Dam	Hoover Dam (U.S.A.) 726 ft.
Largest Peninsula	India.
Highest tree	Giant Sequoia tree in the Hamboldt State Park, California—364 ft. high and estimated to weigh nearly 2,000 tons.
Largest Island	Greenland (827,200) sq. miles).
Densest Population	Java (over 800 per sq. mile).
Largest Bell	Bell of Moscow, 21 ft. high, 21 ft. diameter and weighs 200 tons.
Largest Planetary Body	Jupiter.
Biggest Park	Yellowstone National Park (U.S.A.) 3,350 sq. miles.
Largest Archway	Sydney Harbour Bridge (Australia).
Largest Bridge	San Francisco Oakland Bridge.
Highest City	Phari, Tibet, altitude 14,300 ft.
Highest Airfield	Ladakh air field (Kashmir), 14,230 ft.
Longest Thoroughfare	Broadway in New York.
Biggest Bank	Bank of America (Total resources 86,072,913,000 in 1949).

GREAT INVENTIONS

1450, *Movable type*, Guttenberg (German).
1608, *Telescope*, Lippershey (Dutch).
1643, *Barometer*, Torricelli (Italian).
1656, *Pendulam Clock*, Huygens (Dutch).
1709, *Thermometer*, Farenheit (German).
1752, *Lightning rod*, Franklin (American).
1765, *Steam Engine* ; Watt (Scot.).
1783, *Balloon*, Montgolfier (Fr.).
1785, *Powerloom*, Cartwright (Eng.).
1793, *Cotton gin*, Whitney (Am.).
1796, *Lithography* : A. Senefelder.

Great Inventions—(*Contd.*)

1798, *Blaching powder*, Tenant (English).
1807, *Steamboat*, Fulton (Am.).
1815, *Miner's safety lamp*, Davy (English).
1819, *Stethoscope*, Laennec (French).
1820, *Galvanometer*, Sweigger (Germany).
1823, *Electromagnet*, W. Sturgeon, (English).
1829, *Steam Locomotive*, Stephenson (English).
1831, *Dynamo*, Farady (Eng.).
1835, *Revolver*, S. Colt (Am.).
1837, *Screw Propeller*: Ericsson (Swedish).
1839, *Photography* : Louis Daguerre (French).
1839, *Rubber, Vulcanised* : Goodyear (U.S.A.).
1842, *Bicycle* : MacMillan (Scottish).
1845, *Portland Cement* : Aspdin, (English).
1846, *Sewing machine* : Elias Howe (American).
1847, *Printing Press, Rotary* : R. Hoe.
1849, *Safety Pin*, Walter Hunt (American).
1851, *Induction coil*, Ruhmkorff, (German).
1852, *Power Elevator*, Otis (American).
1852, *Gyroscope* : Leon Faucault.
1855, *Gas Burner*, Bunsen (Ger.).
1856, *Steel*, Bessemer (English).
1857, *Elevator, Passenger*: E.G. Otis.
1858, *Atlantic cable*, Field (American).
1861, *Motion picture projector* : Sellers (U.S.A.)
1861, *Machne Gun* : R. J. Gatling.
1862, *Dynamite*: Nobel (Swedish).
1868, *Lawn mower*: Hills (Am.).
1868, *Typewriter*: Sholes (Am.).
1868, *Air brake*: Westinghouse (American).
1870, *Celluloid* : Hyatt (Am.).
1877, *Telephone*: Bell (Am.).
1877, *Microphone*, Berliner (Amrican).
1877, *Phonograph* : Edison (American).
1878, *Electric lamp*: Edison (American).
1879, *Cash register* : Ritty (American).
1880, *Cream Separator*: De Laval (Swedish).
1883, *Rayon*: Jos. Swan (Eng.).
1884, *Fountain pen*: Waterman (American).
1884, *Linotype*: O. Mergenthaler (American).
1885, *Motor Cycle*: Daimler (Ger.).
1885; *Electric Transformer*: W. Stanley.
1887, *Electric Motor*: Telsa (American).
1887, *Gramophone*: Berliner (American).
1888, *Camera*: Eastman (Am.).
1888, *Pneumatic tyre*: Dunlop (American).
1888, *Calcium Carbide*: Wilson (American).
1888, *Adding Machine*: W. Burroughs.
1891, *Kinetoscope* : Edison (American).
1892, *Colour photography*: Ives (American).
1892, *Motor, A.C.*: Nikola Tesla.
1893, *Halftone engraving*: Eves (American).
1893, *Motion Pictures* : Edison (American).
1895, *Photo-electric cell*: Elster and Geitel (German).
1895, *Moving picture projector*: Louis Lumiere (French).
1895, *Wireless*: G. Marconi (It.).

Great Inventions—(*Contd.*)

1896, *Wireless Telegraphy*: G. Marconi (Italian).
1897, *Diesel engine*: R. Diesel, (German).
1900, *Submarine*: Holland (American).
1900, *Airship*: rigid dirigible: Zeppelin (German).
1900, *Tractor Caterpillar*: B. Holt.
1903, *Airplane*: Wright Brothers (American).
1905, *Gyrocompass*: Sperry (American).
1906, *Radio Telephone*: De Forest (American).
1907, *Bakelite*: Leo H. Bakeland (American).
1908, *Rifle, automatic*: J. M. Browning.
1909, *Helicopter*: L. C. Breguet.
1911, *Hydroplane*: G. H. Curtiss.
1911, *Automatic self starter*: C. F. Kettering.
1912, *Cellophane*: Brandenburger (French).
1912, *Mercury vapour lamp*: Peter C. Hewett.
1914, *Military tank*, Swinton (Eng.).
1914, *Stainless Steel*: Brearly (Eng.).
1915, *Filament, tungsten*: I. Langmuir.
1920, *Autogyro*: De la Cierva (American).
1925, *Television*: Baird (Scottish).
1925, *Photo-telegraphy*: Bell Lab. (U.S.A.).
1931, *Cyclotron*: E. O. Lawrence.
1933, *Frequency Modulation*: E. H. Armstrong.
1937, *Nylon*: Carothers (U.S.A.).
1945, *Atomic Bomb*: American and Br. Scientists.

CHEMICAL INVENTIONS AND DISCOVERIES

(*Also Applied Chemistry*)

1650—Glauber: manufacture of Hydrochloric acid.
1766—Cavandish: Discovery of inflammable air (*Hydrogen*).
1774—Priestley: Discovery of Oxygen.
1783—Lavoisier: First quantitative synthesis of water.
1809—Gay-Lussac: Laws of gases.
1838—Wohler and Liebig: Synthesis of urea; Foundation of organic chemistry.
1841—Faraday: Induction of electric current.
1856—Bessemer: Air blast converter for manufacture of steel.
1858—Hofmann: Aniline in coal-tar; aniline dyes.
1861—Solvay: Manufacture of soda from salt.
1868—Lockyer: Discovery of helium on sun by use of spectroscope.
1873—Linde: Ammonia refrigeration.
1886—Hall: Manufacture of aluminium by electrolytic action.
1891—Frasch: Method of mining sulphur.
1896—Becquerel: Radioactivity of uranium.
1908—Onnes: Liquefaction of helium.
1912—Laue, Bragg: X-ray structures of crystals.
1913—Mosley: Atomic Numbers.

Chemical Inventions and Discoveries—(*Contd.*)

1913—Haber: Synthesis of ammonia from nitrogen and hydrogen.
1919—Ashton: Mass streptoscope for separation of isotopes.
1930—Carothers: Nylon Plastics.
1932—Urey: Discovery of deuterium.
1934—Joliot Curie: Artificial radioactivity.
1934—Urey: Heavy water.

DISCOVERIES AND INVENTIONS IN ELECTRICITY

1745—Von Kleist: Leyden jar condenser.
1752—Franklin: .Lightning rod and nature of lightning.
1791—Galvani: Theory of animal electricity.
1800—Volta: Current electricity and electric battery.
1826—Ohm: Laws of electrical resistance.
1828—Henry: Electromagnetism and induction.
1832—Morse: Electric telegraph.
1852—Gauss: System of absolute electric measurements.
1938—Page: Induction Coil.
1870—Gramme: First industrial dynamo.
1876—Bell: Telephone.
1878—Crookes: Discovery of cathode ray.
1878—Edison: First electric incandescent lamp.
1885—Stanley: Electric Transformer.
1892—Tesla: Alternating current motor.
1892—Steinmetz: Laws of alternating current.
1895—Roentgen: Discovery of X-ray.
1896—Marconi: Practical wireless.
1897—Thomson: Isolation of the electron.
1904—Fleming: First diode radio tube.
1907—De Forest: Triode radio tube.
1914—Coolidge: Tungsten filament lamp.
1925—Baird: Discovery of television.

DISCOVERIES IN MEDICINE AND PHYSIOLOGY

1628—Harvey: Circulation of blood.
1675—Leewenhock: Bacteria.
1737—Linnaeus: System of classifying plants and animals.
1796—Jenner: Vaccination for small-pox.
1819—Laennec: Invention of stethoscope.
1842—Long: First use of ether as anesthetic in surgery.
1847—Simpson: Anesthetic properties of choloroform.
1867—Lister: Antiseptic surgery.
1880—Nicolaier: Discovery of titanus germs.
1880—Eberth: Discovery of typhoid bacillus.
1882—Metchnikov: Function of white blood corpuscles discovered.
1882—Koch: Tuberculosis bacteria.
1883—Klebs: Diphtheria bacillus.
1885—Pasteur: Preventive of rabies.
1890—Emil von Behring: Diphtheria antitoxin.

Discoveries in Medicine and Physiology—(*Contd.*)

1894—Kitasato: Discovery of plague bacillus.
1894—Roux: perfection of diphtheria antitoxin.
1901—Takamine: First hormone isolated. Isolation of adrenaline.
1905—Binet: Intelligency tests.
1906—Wasserman: Tests for syphillis.
1907—Shull: Development of hybrid corn.
1907—Willslatter: Constitution of chlorophyll.
1910—Pavlov: conditioned reflex.
1910—Ehrlich: Salvarsan, cure of syphillis.
1913—Schick: Test of susceptibility to diphtheria.
1913—Goldberger: Cause and control of pellagra.
1913—McCollum: Isolation of vitamin A.
1922—Banting, MacLeod: Insulin for diabetes.
1926—Minot, Whipple and Murphy: Liver treatment of anæmia.
1929—Sir A. Fleming: Penicillin.
1932—Domagk: Sulfa drugs as bactericides.
1932—H. C. Urey: Deuterium (heavy Hydrogen).
1935—W. M. Stanley: Virus, crystalized.
1940—Roblin: Sulfadiazine.
1945—Wakeman: Streptomycin.
1946—Du Vigneaud: Synthetic penicillin.
1948—B. M. Duggar: Aureomycin.

THEORIES

Alternating Current, Laws of: Steinmetz, 1592.
Atomic Theory: Johu Dalton, 1803.
Blood circulation: W. Harvey, 1628.
Classification of Plants & Animals: C. Lennneus, 1737-53.
Conditioned Reflex: J. Pavlov, 1910.
Displacement of water, Theory of: Archimedes 3 B.C.
Dynamic theory of heat: Kelvin, 1851.
Electromagnetic Waves: Hertz, 1886.
Evolution by natural selection: Darwin, 1859.
Falling bodies, law of: Galileo, 1590.
Gravitation Law of: Neoton, 1687.
Germ Theory: Pasteur, 1876.
Heredity, Laws of: G. Mendel, 1865.
Intelligence testing, modern: A. Binet & T. Simon, 1905.
Isotopes, Theory of: F. Saddy, 1912.
Light, Electromagnetic, theory of: J. C. Maxwell, 1873.
Molecular hypothesis: A. Avogadro, 1811.
Ohm's Law: G. S. Ohm, 1827.
Origin of Species: Darwin, 1859.
Periodic table: D. Mendeleev, 1869.
Psychoanalysis: S. Freud, C1904.
Quantum Theory: Max Von Plank, 1901.
Relativity, theories of: A. Einstein 1905-50.
Spectrum Analysis: R. Bunsen & G. Kirchnoff, 1859.
Water, Synthesis of: H. Cavandist, 1781.

DISCOVERIES IN PHYSICS

1785—Coulomb: Fundamental laws of electrical attraction.
1675—O. Romer: Velocity of light.
1798—Thompson: Mechanical theory of heat.
1815—Fresnel: Diffraction of light.
1840—Joule: measurements of electric current.
1847—Helmholtz: Law of conservation of energy.
1873—Maxwell: Electromagnetic theory of energy.
1886—H. Hertz: Electromagnetic wave.
1896—Becquerel: Discovery of radio-acticity.
1897—Thomson: Discovery of electrons.
1897—Wilson: Development of cloud chamber to detect subatomic particles.
1902—Michelson: Velocity of light.
1919—Rutherford: Proton.
1924—De Broglie: Wave nature of the electrons.
1932—Chadwick: Discovery of neutron.
1932—Anderson: Discovery of positron.
1934—Fermi: Use of slow neutrons in atom smashing.
1938—Hahn: Discovery of uranium fission.
1941—Fermi: Atomic pile for generation of power.

NOBEL PRIZES

Physics

1901—W. K. Roentgen (Ger.).
1902—H. A. Lorentz., and P. Zeeman (Denmark).
1903—A. H. Becquerel, France and Pierre and Marie Curie (France).
1904—Lord Rayleigh (England).
1905—Philipp Lenard (Ger.).
1906—J. J. Thomson (England).
1907—A. A. Michelson (Am.).
1908—G. Lipman (France).
1909—G. Marconi, Italy and F. Braun (Germany).
1910—J. D. van der Waals (Holland).
1911—Prof. W. Wien (Ger.).
1912—Gustaf Dalen (Sweden).
1913—Prof. H. Hamerlingh-Annes (Denmark).
1914—Prof. M. von Laue (Ger.).
1915—Prof. W. H. Bragg and W. L. Bragg (England).
1916—*No award.*
1917—C. G. Barlka (England).
1918—Max Planck (Germany).
1920—Prof. C. E. Guillaume (Switzerland).
1921—Dr. A. Einstein (Ger.).
1922—Niels Bohr (Denmark).
1923—R. A. Millikan (Am.).
1924—K. M. G. Seigbahn (Sweden).
1925—Dr. James Franck (Ger.) & Dr. G. Hertz (Ger.)
1926—Jean B. Perrin (France).
1927—Prof. Arthur Compton (America) and Prof. C. T. Rees Wilson (England).
1928—Prof. O. W. Ricardson (Eng.).
1929—Duc. L. V. d'Brobile (France).
1930—Sir Chandrasekhara Venkata Raman (India).
1931—*No award.*
1932—W. Heisenberg (Ger.).
1933—P. A. M. Dirac (England) and Erwin Schrodinger (Austria).
1934—*No award.*
1935—J. Chadwick (England).
1936—Prof. V. F. Hess (Austria) and C. D. Anderson (America).

Nobel Prizes—(*Contd.*)

1937—C. J. Davisson (Am.) & G. P. Thomson (England).
1938—E. Fermi (Italy).
1939—E. O. Lawrence (Amer.).
1940-42—*No awards.*
1943—Prof. O. Stern (Am.).
1944—Prof. I. I. Rabi (Am.).
1945—W. Pauli (Switzerland).
1946—P. W. Bridgman (Am.).
1947—Sir E. Appleton (Eng.).
1948—Prof. P. M. S. Blackett (England).
1949—Hidenki Yukawa (Japan).
1950—C. F. Powell (England).
1951—Sir John Cockcroft (Eng.) and E. T. S. Walton (Eire).
1952—Dr. E. Purcell & Prof. Felix Bloch (America).

Medicine and Physiology

1901—Emil A. von Behring (Germany).
1902—Sir Ronald Ross (Eng.).
1903—N. R. Finsen (Denmark).
1904—Ivan P. Pavlov (Russia).
1905—Robert Koch (Germany).
1906—Profs. Ramony Cajal (Spain) and Camillo Golgi (Italy).
1907—C. L. A. Laveran (France).
1908—Dr. Paul Ehrlich (Ger.).
1909—T. Kocher (Germany).
1910—A. Kossel (Germany).
1911—A. Gullstrand (Sweden).
1912—Dr. A. Carrel (America).
1913—Charles Richet (France).
1914—Dr. R. Barnay (Austria).
1915-18—*No award.*
1919—Dr. J. Bordet (Belgium).
1920—Prof. A. Krogh (Denmark).
1921—*No award.*
1922—Prof. A. Hill (Eng.) & Prof. Mayerhoff (Ger.).
1923—Dr. F. G. Banting and Dr. J. J. R. McLeod (Canada).
1924—W. Einthoven (Holland).
1925—*No award.*
1926—Prof. J. Fibiger (Denmark).
1927—Julius W. Jaureg (Aust.).
1928—Chales Nicolle (France).
1929—Sir F. G. Hopkins (Eng.) & Dr. E. Eijkmann (Holland).
1930—Karl Landsteiner (Am.).
1931—Otto, H. Warburg (Ger.).
1932—Sir C. Sherrington & Prof. E. D. Adrian (Eng.).
1933—T. H. Morgan (Am.).
1934—Drs. G. Minot, W. P. Murphy and Dr. G. H. Whipple (America).
1935—Dr. H. Spemann (Germ.).
1936—Sir Henry Dale (Eng.) & Prof. Otto Loewe (Aust.).
1937—Prof. Albert von Szengtyorgyi (Hungary).
1938—Prof. C. Heymans (Belg.).
1939—Prof. G. Domagk (Germ.).
1940-42—*No award.*
1943—Prof. Henrik Dam (Copenhagen) and Prof. Edward Doisy (U.S.A.).
1944—Prof. Joseph Erlanger and Prof. H. Gasser (U.S.A.).
1945—Sir A. Fleming, Sir Howard Florey and Dr. E. B. Chain (England).
1946—H. J. Muller (U.S.A.).
1947—Dr. Carl F. and Mrs. F. Cori, (Czechoslovakia) and Dr. Bernado A. Housay (Brazil).
1948—Dr. Paul Muller (Swiss.).
1949—W. R. Hess, (Swiss) & A. C. D. F. E. Moniz (Portugal).
1950—Drs. E. C. Kendall & P. S. Hench (Switzerland).
1951—Dr. Max Theiler (U.S.A.).
1952—Dr. S. Waksman (U.S.A.).

Chemistry

1901—J. H. Hoff (Holland).
1902—Emil Fischert (Germany).
1903—S. A. Arrhenius (Sweden).
1904—Sir W. Ramsay (Eng.).
1905—A. Von Baeyer (Ger.).
1906—Prof. H. Moissan (France).
1907—E. Buchner (Germany).
1908—Prof. Ernest Rutherland (England).
1909—Prof. W. Ostwald (Ger.).
1910—Otto Wallach (Ger.).
1911—Marie Curie (France).
1912—V. Grignard and P. Sabatier, (France).
1916-17—*No award.*
1913—Alfred Werner (Swiss.).
1914—T. W. Richards (Eng.).
1915—R. Willstatter (Ger.).
1916-17—*No award.*
1918—Firtz Haber (Germany).
1919—*No award.*
1920—Walther Nernst (Ger.).
1921—Prof. F. Soddy (Eng.).
1922—F. W. Aston (England).
1923—Fritz Pregl (Austria).
1924—*No awrad.*
1925—R. Zsigmondy (Ger.).
1926—Dr. T. Svedberg (Sweden).
1927—Prof. H. Wieland (Ger.).
1928—Dr. A. Windaus (Ger.).
1929—Dr. A. Harden (Eng.) and H. von Euler-Cheplin (Sweden).
1930—Hans Fischer (Germany).
1931—Prof. Carl Bosch and Prof. F. Bergius (Germany).
1932—Irving Langmair (U.S.A.).
1933—*No award.*
1934—Dr. H. C. Urey (U.S.A.).
1935—Frederic & Irine Joliot-Curie (France).
1936—Prof. J. W. Debye (Ger.).
1937—W. N. Haworth (Eng.) & Paul Karrer (Swiss.).
1938—Prof. R. Khun (Ger.).*
1939—A. Butenandt (Ger.) & Prof. Ruzicka (Swiss.).
1940-42—*No award.*
1943—Prof. G. Hevesy (Hun.).
1944—Otto—Hahn (Germany).
1945—Artturi Virtanen (Finland).
1946—James B. Sumner, W. M. Stanley & J. H. Northrop (Am.).
1947—Sir R. Robinson (Eng.).
1948—Prof. Arne Telius (Sweden).
1949—W. F. Giauque (U.S.A.).
1950—Otto Diels & Kert Adler (Germany).
1951—Dr. E. M. McMillian & Dr. G. T. Leeborg (U.S.A.).
1952—Dr. A. J. P. Martin & R. L. M. Synge (Eng.).

Literature

1901—Rene F. A. Sully-Frudhomme (France).
1902—T. Mommsen (Germany).
1903—B. Bjornson (Norway).
Jose Echegarry (Spain).
1904—H. P. Mistral (France) and Jose Echegarry (Spain).
1905—H. Sienkiewicz (Poland).
1906—G. Carduici (Italy).
1907—Rudyard Kipling (Eng.).
1908—R. Eucken (Germany).
1909—Selma Largerlof (Sweden).
1910—Paul Heyse (Germany).
1911—M. Maeterlink (Belgium).
1912—G. Hauptmann (Ger).
1913—Rabindranath Tagore (India).
1914—*No award.*
1915—Romain Rolland (France).

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*Declined.

1916—V. Heidenstam (Sweden).
1917—Karl Gjellerup and H. Pontoppidam (Denmark).
1918—*No award.*
1919—C. Spitteler (Swiss.).
1920—Knut Hamsun (Norway).
1921—Anatole France (France).
1922—J. Benavente (Spain).
1923—W. B. Yeats (Ireland).
1924—W. Reymont (Poland).
1925—G. B. Shaw (England).
1926—Grazia Deledda (Italy).
1927—Henri Bergson (France).
1928—Mme. S. Undset (Nor.).
1929—Thomas Mann (Germany).
1930—Sinclair Lewis (America).
1931—Erik A. Karlfieldt (Sweden).
1932—J. Galsworthy (England).
1933—Ivan Bunin (Russia).
1934—Luigi Pirandello (Italy).
1935—*No award.*
1936—Eugene O'Neil (U.S.A.).
1937—R. M. du Gard (France).
1938—Pearl S. Buck (U.S.A.).
1939—Emil Sillanpaa (Finland).
1940-43—*No awards.*
1944—J. V. Jensen (Denmark).
1945—Gabriela Mistral (Chile).
1946—Herman Hesse (Swiss).
1947—Andre Gide (France).
1948—T. S. Elliot (England).
1949—W. Faulkner (U.S.A.).
1950—Bertrand Russell (Eng.).
1951—Par Lagerkyist (Sweden).
1952—Francois Mauriac (Fr.).

Peace

1901—Henri Dunant (Switzerland) & F. Passy (Fr.).
1902—Elei Ducommum and A. Gobat (Belgium).
1903—W. R. Cremer (England).
1904—The Institute of International Law (Belgium).
1905—Bertha von Suttner (Austria).
1906—T. Roosevelt (America).
1907—E. T. Monetal (Italy) & Louis Renault (France).
1908—K. P. Arnoldson (Sweden) & Frederick Bajer (Den.).
1909—Baron de Constant (France) & A. Beernaert (Belgium).
1910—International Permanent Peace Bureau (Swiss).
1911—Prof. T. M. C. Asser (Holland) & A. Fried (Austria).
1912)—Elihu Root (U.S.A.).
1913—H. la Fontaine (Belgium).
1914-16—*No award.*
1917—International Red Cross, (Geneva).
1918—*No award.*
1919—Woodrow Wilson (U.S.).
1920—Leon Bourgeois (France).
1921—K. H. Branting (Sweden) & Christian L. Lange (Nor.).
1922—F. Nansen (Norway).
1923-24—*No award.*
1925—Gen. Dawes (U.S.A.) & Sir A. Chamberlain (Eng.)
1926—Aristide Briand (France) & G. Stresemann (Germ.).
1927—F. Buisson (France) & Ludwig Quidde (Germany).
1928—*No award.*
1929—F. B. Kellogg (U.S.A.).
1930—L. O. J. Soderblom (Sweden).
1931—Jane Addams & Dr. N. M. M. Butler (U.S.A.).
1932—*No award.*
1933—Norman Angell (Eng.).
1934—A. Henderson (England).
1935—Carl von Ossietosky (Ger.).
1936—C. S. Lamas (Argentine).
1937—Viscount Cecil (England).
1938—Nansen International Office for Refugees (Geneva).
1939-43—*No awards.*

1944—International Committee of Red Cross (Swiss).
1945—Cordell Hull (U.S.A.).
1946—Eamily G. Balch and John Mott (U.S.A.).
1947—American Friends Service Committee (U.S.A.) and Br. Society of Friends Service Council (Eng.).
1948—*No award.*
1949—Lord Boyd-Orr (England).
1950—Ralph J. Bunche (U.S.A.).
1951—Leon Johnaux (France).
1952—*No award.*

INDIAN STONES AGAINST PLANETARY ACTIONS

Sun (*Ravi*) ..	Ruby	Venus (*Sukra*) ..	Diamond
Mars (*Mangal*) ..	Coral	Saturn (*Shani*) ..	Sapphire
Moon (*Chandrá*) ..	Pearl	Ascending Node (*Rahoo*) ...	Gomed
Mercury (*Budh*) ..	Emerald	Descending Node (*Ketoo*) ..	Cat's eye
Jupiter (*Brihaspati*) ..	Pokraj		

FAMOUS DIAMONDS

	Carats		*Carats*
Cullinan ..	3,106	Tiffany ..	128
Kohinoor ..	$106^1/_{16}$	Victoria (now Nizam	$457^1/_2$
Orlov ..	$194^3/_4$	Star of S. Africa ..	$350^1/_2$
Florentine ..	$133^1/_6$	Hope ..	$44^1/_2$
Regent or Pit ..	$137^7/_8$		

BIRTH STONES AND THEIR EFFECTS

Jan.—*Garnet*—symbolises strength, overcomes all sorts of depression.
Feb.—*Amethyst*—protects against strife and soothes nervous system.
Mar.—*Blood Stone*—heals wounds, ensures success.
Apl.—*Diamond or White Saphire*—frustrates evil spells etc.
May—*Emerald*—retains health and discriminates friend from foe.
June—*Agate or Pearl*—brings sound physic, longivity and success.
July—*Ruby*—safeguards against enemy actions.
Aug.—*Sardonyx*—signifies blessings and protects from humiliation.
Sept.—*Blue sapphire*—relieves from mental gloom and despair in life.
Oct.—*Opal*—increases will force.
Nov.—*Topaz*—prevents epidemic & cures ocular troubles.
Dec.—*Turquoise*—ideal love-gift & conveys fortune.

LENGTH OF LIFE

Mammals	*Years*	*Mammals*	*Years*	*Mammals*	*Years*
Elephant ..	60	Camel ..	28	Tiger ..	20
Rhinoceros ..	50	Leopard ..	21	Cow ..	20
Hippopotamus	40	Horse ..	20	Monkey ..	15
Bear ..	35	Lion ..	20	Squirrel ..	15

Mammals	*Years*
Goat	15
Cat	15
Giraffe	14
Sheep	13
Ox	13
Dog	10
Hare	6
Mouse	2-6

Amphibian	*Years*
Frog	15
Toad	15

Reptiles	
Tortoise	100
Turtle	42
Aligator	40
Crocodile	40
Python	40
Chameleon	3

Birds	*Years*
Goose (domestic)	65
Parrot	54
Pelican	52
Eagle (golden)	46
Crane	43
Ostrich	40
Crow	30
Swan	25
Heron	22
Canary	20

Fish	*Years*
Pike	70
Carp	50
Eel	10
Goldfish	10
Salmon	4-6

ANIMAL AND BIRD RECORDS

Tallest Animal—Giraffe.

Largest land animal—Elephant.

Fastest Bird—Swift, sometimes flies 200 miles per hour.

Largest quadruped of the dog family—Wolf.

Largest animal of the cat family—Lion.

Largest of man-like or anthropoid apes—Gorilla.

Largest of the sea birds—Albatross.

Fastest animal—Cheetah.

Largest sea animal—Blue Whale.

Smallest Bird—Humming bird.

Longest lived creature—Blue Whale (500 years).

Largest of the flat fish—Helibut.

Longest neck—Giraffe.

Largest living bird—Ostrich.

Heaviest bird—Condor.

SPEED OF BIRDS

	m.p.h.
Golden Eagle	120
Ducks	55-70
Geese	50-60
Pheasant	60
Quail	48-58
Crow (top speed)	60
Crow (normal speed)	25-30
Ruby-throated humming bird	55

LONGIVITY OF TREES

Larch tree	800
Fir tree	1,200
American Redwood tree	4,000
Baobab tree	4,000

COMPARATIVE SPEEDS

In the Air	*m.p.h.*
Vulture	89
Homing pigeon	62
Swallow	110
Golden Eagle	120
Duck Hawk	180
Swift	60

In the Air	*m.p.h.*
Arrow	200
Fighter plane (over)	400
Dive bomber	725
Transport plane	195

In the Air	*m.p.h.*
Pitched base ball	98
Bullet—2,000 ft. per second.	
Frigate-bird	261
Crow	60
Wild Duck	48

Comparative Speeds—(*Concld.*)

In the water	*m.p.h.*
Swimmer	4·01
Sail-boat	30
Passenger liner	35
Light Cruiser	50
Carp	0·9
Pike	10
Flying fish	35
Torpedo boat	60
Outboard Motor boat	74·39
Racing speed boat	141·74
Sail Fish	68
Sword-fish	60
Tunny	44
Trout	35
Salmon	25

On Land	*m.p.h.*
Man	24
Racing horse	43
Jack Rabbit	45
Gazelle	60
White-tailed deer	49
Skater	25·3
Turtle	·01
Speed test automobile	394
Steamlined train	127·2
Greyhound	40
Cheetah	70
Snail	0·07
Hares	45
Rabbit	35
Rat	6
Mole	2½
Elephant	25
Rhino	28
Giraffe	32
Camel	8-10
Emu	40
Kangaroo	40-45

LARGEST SHIPS

	Gross tonnage	*Length (ft.)*	*Breadth (ft.)*	*Speed (knots)*
Queen Elizabeth (British)	83,673	987·4	118·6	28½
Queen Mary (British)	81,237	975·2	118·6	28½
United States (U.S.A.)	53,000	990·0	101·1	..
Liberte (France)	51,840	890·0	102·1	27
Ile de France (France)	44,356	763	91·9	23
Nieuw Amsterdam (Dutch)	36,667	713·7	88·3	21½
Mauretania (British)	35,677	739·4	89·4	23
Caronia (British)	34,183	687·5	91·4	22
Pasteur (France)	30,447	670·7	88	23½
Edinburgh Castle (British)	28,705	717·9	84·0	22
Pretoria Castle (British)	28,705	717·9	84·0	22
Himalaya (British)	27,955	681·7	90·8	22
Britannic (British)	27,666	683·6	82·4	18
Capetown Castle (British)	27,002	702·9	82·5	20
Georgic (British)	27,469	682·8	82·4	18
Orcades (British)	28,164	681·7	90·8	22
Oronsay (British)	27,632	681·7	90·8	22

ATLANTIC CROSSING SPEED RECORDS

	Average Speed (knots)	*Time*
1938 *Queen Mary* 83,000 tons (British	32·08	3 days 20 hrs. 42m.
1952 *United States* 53,000 tons (U.S.A.)	35·08	3 days 10 hrs. 40m.

GREATEST HEIGHT AND GREATEST DEPTH

	Feet		Feet
Highest point reached by passenger balloon	72,395	Greatest submarine depth	600
Highest point reached by airplane	63,668	Deepest dive by man in bathyscope	10,335
Mount Everest	29,002	Deepest mine more than	9,000
Greatest diver depth	420	Deepest oil well over	16,000
		Deepest ocean sounding	6·7 miles

NATIONAL AND STATE FLOWERS

China	Narcissus.	Spain	Pomegranate.
England	Rose.	U. S. A.	Golden rod.
France	Fleur-de-lis.	Persia	Rose.
Germany	Cornflower.	Wales	Leek or Daffodils.
Greece	Laurel.	Prussia	Linden.
India	Lotus.	Canada	Maple leaf.
Ireland	Shamrock.	Egypt	Lotus.
Italy	Lily.	Holland	Tulip.
Mexico	Cactus.	Australia	Golden Wattle.
Switzerland	Edelweiss.	Denmark	Forget-me-not.
Japan	Chrysanthemum	Spain	Red carnation.
Scotland	Thistle.		

HIGHEST RAILWAY BRIDGES

	Feet		Feet
Fades Viaduct (France)		Loa (Bolivia)	336
Victoria Falls (South Africa)	420	Assopos (Greece)	330
Gurabid (France)	400	Pecos (S. Pacific)	321
Viain (France)	377	Goktiek (Burma)	320

NOTEWORTHY RAILWAY BRIDGES & VIADUCTS

	Length (ft.)		Length (ft.)
Great Salt-lake viaduct (U.S.A.)	63,360	Forth Bridge (Scotland)	8,298
Huey P. Long Bridge (U.S.A.)	23,235	Delaware River Bridge (U.S.A.)	8,126
Bay Bridge (U.S.A.)	22,730	Queensboro Bridge (U.S.A.)	7,449
Lower Zambesi Bridge (Portuguese E. Africa)	12,064	Williamsburg Bridge (U.S.A.)	7,308
Tay Bridge (Scotland)	11,653	Mahanadi Bridge (India)	6,912
Storstrom Bridge (Denmark)	10,537	Brooklyn Bridge (U.S.A.)	6,537
Victoria Bridge (Canada)	10,284	Izat Bridge (Allahabad)	6,381
Sone Bridge (India)	10,052	Moerdyk Bridge (Holland)	4,592
Hwang-Ho Bridge China	9,873	Sydney Harbour Bridge (Australia)	3,770
Godavery Bridge (India)	9,096	Quebec Bridge (Canada)	3,238

WORLD POPULATION

ESTIMATE OF WORLD POPULATION 1650-1950

(*In millions*)

	1650	1750	1850	1900	1950
Africa	100	100	100	120	199
America	8	11	59	144	328
Asia (Ex. Asiatic U.S.S.R.)	257	437	656	857	1,272
Europe & Asiatic U.S.S.R.	103	144	274	423	594
Oceania	2	2	2	6	13

(*U. N. Population Bulletin 1951*)

JEWISH POPULATION OF THE WORLD 1951

North America	5,185,000	Africa	60,359,000
South America	597,850	Oceania	75,000
Europe	3,505,800	*Total*	351,699,103
Asia	251,227,347		

ARAB POPULATION OF THE WORLD

Arabia, North Africa, Morocco, Tunesia, Levant, Iraq	44,790,000

U. S. POPULATION

All Classes	150,507,121	Negroes	15,042,692
White	124,780,454	Indians	343,410
Foreign-born Whites	10,161,168	Japanese	141,768
		Chinese	117,629

LARGEST POPULATED CITIES

London	8,346,000	Paris	2,800,000
New York	7,891,959	Jakarta	2,800,000
Shanghai	5,406,644	Calcutta	2,549,790
Tokio	5,385,071	Mexico City	2,527,328
Moscow	4,137,018	Rio De Jenario	2,413,125
Berlin	3,729,300	Cairo	2,100,506
Chicago	3,620,962	Philadelphia	2,071,605
Leningrad	3,191,304	Los Angeles	1,970,358
Buenos Aires	3,000,371	Sao Paulo	2,227,512
Bombay	2,840,011	Osaka	1,966,136

HIGH POPULATION DENSITIES (PER SQUARE MILE)

Monaco	33,898·3	Germany (Fed Rep)	502·7	Italy	404·5
Trieste	1,290·1	Tangier	478·4	Lebanon	375·2
Netherlands	825·3	Vatican City	470·6	Korea	343·1
Belgium	734·4	East Germany	415·2	San Marino	336·3
Japan	575·4			India	313·7
U. K.	537·8			Ceylon	305·7

WORLD POPULATION*

Estimated mid-year Population, area and Density of Population

(*In millions*)
Source : U. N. Year-Book 1951-52

	1920	1930	1940	1950	1951	*Area Sq. k.m.* 1000 1951	*Pop. per Sq. k.m.* 1951
World Total	1753-1872 (1813)	1937-2036 (1987)	2157-2270 (2213)	2350-2471 2,411	2376-2499 2438	135,112	18
Africa ..	130-151 (140)	145-168 (155)	163-181 (172)	189-205 197	119-208 (200)	30,292	6—7
America ..	204-212 (208)	240-247 (244)	274-280 (277)	326-333 (330)	332-340 (336)	42,048	8
Asia Ex. u.s.s.r.	922-1019 (970)	1007-1087 (1047)	1128-1224 (1176)	1232-1333 (1283)	1243-1346 (1295)	27,030	46—50
Europe Ex. u.s.s.r.	325·5-330·5 328·0)	353·0-357·0 (355·0)	378·5-382·5 (380·5)	391·5-395·0 (393·0)	394·0-398·0 (396·0	4,920	80—81
Oceania ..	8·6-9·1 (8·8)	10·2-10·7 (10·4)	11·1-11·5 (11·3)	12·8-13·2 (13·0)	13·1-13·5 13·3	8,557	2

* The population estimates are shown as ranges indicating the probable lowest and highest population. The mid-point of each range is given in parentheses.

WORLD POPULATION BASED ON RELIGION*

Source: *Encylopedia Britannica*

Religion	*N. America*	*S. America*	*Europe*	*Asia*	*Africa*	*Oceania*	*Total*
Christians	128,467,527	91,677,138	441,383,109	25,374,305	28,911,430	26,171,973	741,985,482
Jewish	5,185,000	597,850	3,505,800	1,247,200	723,500	44,000	11,303,350
Muslim	32,600	139,156	3,866,000	251,227,347	60,359,000	75,000	315,699,103
Zoroastrian	..	..	..	124,890	..	..	124,890
Shinto	..	..	..	25,000,000	..	..	25,000,000
Taoist	15,000	17,000	12,000	50,000,000	1,200	8,000	50,053,200
Confucian	85,000	95,000	50,000	300,000,000	7,500	52,000	300,289,500
Buddhist	165,000	135,000	..	150,000,000	..	..	150,300,000
Hindu	10,000	275,000	..	255,030,506	300,000	100,000	255,715,506
Primitive	50,000	1,000,000	..	45,000,000	75,000,000	100,000	121,150,000
Others	76,540,873	9,803,856	82,491,091	160,559,752	12,639,370	5,363,027	347,397,969
Grand Total	210,551,000	103,740,000	531,308,000	1,263,564,000	177,942,000	31,914,000	2,319,019,000

*The statistics on religion are only very rough approximations.

POPULATION OF LEADING COUNTRIES

(*Source* : U. N. Year-Book 1951-52)

Africa

Egypt (1947)	18,966,767
Union of S. Africa (1951)	12,646,375
Tunisia (1946)	3,230,952

North America

Canada (1951)	14,009,429
Cuba (1943)	4,778,583
Mexico (1950)	25,715,350
U.S.A. (1950)	150,697,361

South America

Argentina (1947)	15,893,827
Brazil (1950)	52,645,479
Chile (1952)	5,885,083
Colombia (1951)	12,266,075
Peru (1940)	6,207,967
Venezuela (1950)	4,985,716

Asia

Afganistan (1950)	109,650
Burma (1941)	16,823,798
Ceylon (1940)	6,657,339
China (estimated 1951)	463,500,000
India (1951)	356,829,485
Indonesia (1930)	60,412,692
Iraq (1947)	4,799,500
Japan (1950)	83,199,637
Korea (1944)	25,120,174
Pakistan (1951)	75,842,000
Philippines (1948)	19,234,182
Thailand (1947)	17,442,689
Turkey (1950)	20,934,670
Malaya Federation (1947)	4,908,086

Europe

Austria (1951)	6,881,100
Belgium (1947)	8,512,195
Bulgaria (1946)	7,022,206
Czechoslovakia (1950)	12,339,674
Denmark (1950)	4,281,275
Finland (1946)	4,032,538
France (1946)	39,829,838
Germany (1946)	64,061,918
Greece (1951)	7,600,000
Hungary (1949)	9,202,799
Ireland (1951)	2,958,878
Italy (1951)	46,737,704
Netherlands (1947)	9,625,499
Norway (1950)	3,277,000
Poland (1950)	24,976,926
Portugal (1950)	8,490,455
Romania (1948)	15,872,624
Spain (1950)	27,976,755
Sweden (1950)	7,044,039
Switzerland (1950)	4,714,992
United Kingdom (1951)	50,211,602
Yugoslavia (1948)	15,722,098

Oceania

Australia (1947)	7,579,358
New Zealand (1951)	1,939,472

U. S. S. R.

U.S.S.R. (1939)	170,464,186
U.S.S.R. (estimated) (1951)	193,000,000

INFANT MORTALITY RATES

(*Deaths of infants under one year of age per* 1,000 *live births*)

Africa

Egypt (1949)	135·5
Union of S. Africa (1951)	33·5

North America

Canada (1950)	40·7
Costa Rica (1951)	87·2
U.S.A. (1951)	28·6
Mexico (1950)	97·1

South America

Argentina (1948)	69·7
Chile (1951)	148·5
Colombia (1950	123·9

Asia

Ceylon (1951)	88·3
India (1949)	122·8
Israel (1951)	39·4
Japan (1951)	57·1
Philippines (1951)	104·2

Europe

Austria (1951)	61·9
Belgium (1951)	64·8
Denmark (1951)	28·8
Finland (1951)	35·1
France (1951)	46·2
W. Germany (1951)	53·3
Iceland (1951)	26·0
Ireland (1951)	45·4
Italy (1951)	67·4
Netherlands (1951)	26·6
Portugal (1951)	89·1
Spain (1951)	67·6
Sweden (1951)	21·4
Switzerland (1951)	30·2
U. K. (1951)	30·9

Oceania

Australia (1951)	25·2
New Zealand (1951)	22·8

CRUDE BIRTH RATES

(Number of live births per 1,000 *persons)*

Africa

Union of S. Africa (1951)	25·5
Egypt (1949)	41·8

North America

Canada (1951)	27·1
U.S.A. (1951)	24·5

South America

Argentina (1950)	25·3
Chile (1951)	32·4
Colombia (1950)	36·7
Peru (1951)	25·3

Asia

Ceylon (1951)	37·3
India (1950)	25·5
Israel (1951)	32·7
Japan (1951)	25·6
Pakistan (1951)	22·7

Europe

Austria (1951)	14·6
Belgium (1951)	16·1
Denmark (1951)	17·8
Finland (1951)	22·9
France (1951)	19·4
W. Germany (1951)	15·7
Iceland (1951)	27·5
Ireland (1951)	21·2
Italy (1951)	18·1
Netherlands (1951)	22·3
Norway (1951)	18·5
Portugal (1951)	24·2
Spain (1951)	20·1
Sweden (1951)	15·6
Switzerland (1951)	17·2
U. K. (1951)	15·9
Yugoslavia (1950)	27·0

Oceania

Australia (1951)	22·9
N. Z. (1951)	24·4

CRUDE DEATH RATES

(Number of deaths, exclusive of stillbirths per 1,000 *persons)*

Africa

Egypt (1949)	20·6
Union of S. Africa (1951)	9·2

North America

Canada (1951)	9·0
Guatimala (1951)	19·6
Mexico (1950)	16·7
U.S.A. (1951)	9·7

South America

Argentina (1950)	9·2
Chile (1951)	15·7
Peru (1951)	9·2
Venezuela (1951)	11·2

Asia

Ceylon (1951)	11·6
Israel (1951)	10·0
India (1950)	16·7
Japan (1951)	10·0
Philippines (1951)	9·1
Pakistan (1948)	12·3

Europe

Austria (1951)	12·7
Belgium (1951)	12·7
Denmark (1951)	8·8
Finland (1951)	10·0
France (1951)	13·2
W. Germany (1951)	10·5
Iceland (1951)	7·8
Ireland (1951)	14·3
Italy (1951)	10·3
Netherlands (1951)	7·6
Norway (1951)	8·3
Portugal (1951)	12·3
Spain (1951)	11·6
Sweden (1951)	9·9
Switzerland (1951)	10·5
U. K. (1951)	12·6
Yugoslavia (1951)	15·4

Oceania

Australia (1951)	9·7
N. Z. (1951)	9·6

MARRIAGE RATES

(*Number of Marriages per 1,000 persons* 1952)

Argentina	8·0	W. Germany	9·4	Peru	2·9
Australia	8·6	Ireland	5·3	Portugal	7·8
Austria	8·3	Israel	11·1	Spain	7·7
Canada	8·8	Italy	11·1	Sweden	7·4
Ceylon (1951)	6·9	Japan	7·9	Switzerland	7·8
Chile	8·1	Netherlands	8·4	U. K.	7·9
Denmark	7·7	N. Z.	8·6	U. S. A.	10·0
Finland	7·9	Norway	8·2	Yugoslavia	10·5
France	7·3				

(*Source* : U. N. Year-Book 1951-52)

WORLD GAZETTEER

(*A BRIEF GUIDE TO THE COUNTRIES OF THE WORLD*)

ABYSSINIA—An empire in East Africa, official name *Ethiopia.* The Emperor directly controls the government, though there now is a Council of Ministers, a Senate and a Chamber of Deputies. All members are appointed by the monarch. The actual form of government is thus the personal rule of the Emperor. Population—15,000,000. Capital—*Adis Ababa.*

AFGHANISTAN—A mountainous Moslem kingdom lying between Pakistan, Iran and Soviet Union, area about 250,000 sq. m. Pop. about 12,000,000. The Government is constitutional monarchy. Legislative power is vested in a parliament consisting of the King, a Senate appointed by the king of 43 members and an elected National Assembly. The main routes to Pakistan passes through the mountains, the chief being Khyber from Kabul and Bolan from Kandahar. The country is mountainous and undeveloped. It can be reached only by a few high passes. There are no railways and nevigable rivers. The country is divided into seven major provinces. Each province is under a governor. Capital—*Kabul.*

ALBANIA—A mountainous Baltic republic in southern Europe bounded by Yugoslavia, Greece and Adriatic Sea, was incorporated with Italy in 1939 but now a free republic. It has typical Soviet government. The supreme power is vested in the popularly elected national assembly, to which the Cabinet, headed by the premier is responsible. Area 10,000 sq. m. Pop. 1,200,000. Capital—*Tirana.*

ANGLO-EGYPTIAN SUDAN—That easterly portion of the Sudan that stretches from the southern boundry of Egypt to the northern boundry of Uganda compirsing some 968,000 sq. m. By an agreement made in 1899 and the Anglo-Egyptian Treaty of 1936, Anglo-Egyptian Sudan became a condominium governed by a British Governor-General on behalf of the two powers. After the World War II the Sudanese nationalist movement gained strength and there was disagreement between Britain and Egypt over the future government of the country. In 1948 despite Egyptan protest, there was established a Legislative Assembly (mainly elected) and a partly nominated Executive Council subject to the ultimate authority of the governor-general. Area—959,000 sq. m. Pop. 7,919,0000. Capital—*Khartoum.*

ANDORRA—Republic of Europe in the Pyrenees mountains under the joint suzerainty of France and Spanish Bishop of Urgel; area 175 sq. m. Pop. 5,000. Capital—*Andorra.*

ARABIA—A peninsula in south-west Asia inhabited by Arabs, was a single political unit, now comprises the following States—Aden Colony (British), Aden Protectorate, Bahrein Islands (Sultanate), Kuwait (Sheikdom), Oman and Masqat (Sultanate), Qatar (Sheikdom), Saudi Arabia, Trucial Coast (Sheikdoms), Yemen (Kingdom).

Saudi-Arabia—is the most important state of the peninsula. It consists of Hejaz, Nejd and Asir. *Sheikdom of Kuwait* on the shore of the Persian Gulf is an independent state. Capital is Kuwait. *Sultanate of Oman anb Masqat* occupies the mountainous south-eastern part of the peninsula. *Quatar* occupies the whole of the Qatar peninsula in the Persian Gulf. It is ruled under British protection by a Sheik. *Sheikdoms of Trucial Coast* extent along part of the Gulf of Oman and southern coast of Persian Gulf. It is ruled by seven semi-independent Sheikhs. *Kingdom of Yemen* is an independent state occupying the southwestern extremity of the peninsula. *Aden* is a British colony and protectorate situated on the volcanic southern tip of the Arabian peninsula along the Gulf of Aden. *Baherein Islands*—These islands form an archipelago in the Persian Gulf and are nominally an independent Sheikdom but are actually a protectorate of Great Britain. The islands are important for their oil, pearl fisheries and strategic position.

ARGENTINA—Second largest South American Republic. It is Federal Union of sixteen provinces and eight territories. The constitution is modelled on that of U.S.A. but each province enjoys a large measure of autonomy. The executive is in the hands of the President, who selects the cabinet. The National Congress has two houses—a 34-member Senate which is popularly elected and a Chamber of Deputies also popularly elected. Each province has its own constitution, elects governor, legislative and judiciary but the president may in a crisis take over the local government. Argentina is regarded as the most important nation in Latin America besides Brazil. Economically it is the most developed of all: it has 43 p.c. of the foreign trade of South America, 54 p.c. of all South American railroads and 55 p.c. of all automobiles. Argentina depends largely on agriculture, in which 70 p.c. of the population are engaged and is one of the world's leading exporters of wheat, maize and beef. Area 1,112,743 sq. m. Pop. 17,196,000. Capital—*Buenos Aires.*

AUSTRALIA—is a self-governing member of the British Commonwealth of Nations and is a federal union of six states—Western Australia, Queensland, Northern Territory, South Australia, New South Wales, Victoria and Australia Capital territory. Australia is primarily an agricultural country, one of the world's greatest producers of wheat and wool, but industralisation has been extensive. Area 3,000,000 sq. m. Pop. 8,285,000. Capital—*Canberra.*

AUSTRIA—is a country of Central Europe. Since World War II, Austria within its 1937 frontiers has been divided into four national zones, as is the City of Vienna. The allied Council and the interallied governing authority consist of the ranking officers of the four participating nations—U.S., Britain. France and the U.S.S.R. under agreement signed by the four powers on June, 28, 1946. The Council's functions are supervisory rather than administrative. It is a federal republic comprised of nine provinces (including Vienna), each of which has its own elected assembly for the control of regional affairs. The federal parliament consists of two houses. The President of the Republic is elected by national popular vote for a term of six years. The Government is administered by the Chancellor and his cabinet. Area 32,388 sq. m. Pop. 6,881,100 Capital—*Vienna.*

BELGIUM—North-west European Kingdom. Government is consitutional hereditary monarchy with a bicameral legislature consisting of the King, the Senate, and the Chamber of Deputies. Belgium is the most densely populated country in Europe. Belgium is also a great colonial power; she possesses Belgian Congo in Central Africa which is one of the world's largest copper producers, the greatest producer of radium and also producers of gold and diamond. The Belgian Colonial Empire consists of *Belgiam Congo* (Africa) and *Ruanda-Urundi* (U. N. Trust territory). Total area 11,750 sq. m. Pop. 8,512,195 Capital—*Brussels.*

BHUTAN—Bhutan is a small semi-independent state lying on the south-east slope of the Himalayas, bordered on the north by Tibet and on the east, south and west by the Indian Union. The inhabitants are Mongolians and follow Buddhism. Agriculture is the chief industry. The country is governed by the hereditary king. A treaty signed with India in August, 1949 increased India's subsidy to Bhutan and placed Bhutan's foreign affairs under Indian control. Area 18,000 sq. m. (approx.). Pop. 300,000. Capital—*Punakha.*

BOLIVIA—South American Republic located in the west central portion of the South America ; Executive power is vested in a President. The National Congress consists of a Senate and a Chamber of Deputies. Area 416,050 sq. m. Pop. 3,922,000. Capital —*La Paz.*

BRAZIL—By far the largest country in South America and occupies nearly half of South America. Brazil is a federation of twenty States, five territories and one federal district. The President is popularly elected for a five year term. The National Congress is composed of two houses—the Senate and Chamber of Deputies. In world comparison, it ranks after U.S.S.R., China and Canada. Brazil leads the world in the production of coffee and castor beans and ranks second in cacao. The coffee crop represents three-quarters of the world's supply. It is the fourth largest country in the world. Area 3,288,063 sq. m. Pop. 533,377,000. Capital—*Rio de Janerio.*

BULGARIA—Balkan Republic ; The constitution of 1947 modelled after that of Soviet Union provides that the unicameral National Assembly is the supreme organ of the State ; area 42,848 sq. m. Pop. 7,022,206 Capital—*Sofia.*

BURMA—A free republic since 4th Jan. 1948 outside the British Commonwealth by a treaty signed in London, on Oct. 17, 1947. The Constitution adopted on Sept. 24, 1947 provides for a government headed by the president, who is elected by the two houses of Parliament meeting in a joint session. The President appoints premier on nomination by the Chamber of Deputies ; the cabinet must enjoy the confidence of the Chamber of the Deputies. The area of the Union includes Burma proper with Chin Hill and Kachin Hill tracts, the Shan States and the Karenni States making a total of 254,493 sq. m. Pop. 17,000,000. Capital—*Rangoon.*

CANADA—Federal Union and a self-governing dominion within the British Commonwealth of Nations with the second continuous land area in the world, stretching across the northern part of the north American continent. It is a federal union of 10 provinces whose powers are laid down in British North America Act of 1867. The executive powers rest nominally in the hands of the Governor-General who represents the English Queen. Actually Governor-General acts only with the advice of the Prime Minister and members of the Cabinet. The Parliament has two houses—a Senate and a House of Commons. Canada is one of the world's leading sources of wheat, enormously rich in forests ; also ores, metals, oils and other raw materials are produced in quantities. Canada is the principal source of nickel in the world. Of special interest is the uranium ore mined in the northern Canada, one of the only two places so far known in the world where raw material for atomic energy can be mined easily. Canadian fishing grounds are among the most extensive and prolific in the world. Population : 13,843,000 ; Capital—*Ottawa.*

CEYLON—The island of Ceylon lies in the Indian Ocean, 12 miles south-east of the southern tip of India. It is now a self-governing Dominion of British Commonwealth from 1948. Under the new Constitution, Ceylon's Government is headed by the Crown-appointed Governor-General, who is advised by a Council of Ministers headed by a Prime Minister. The bicameral parliament consists of a House of Representatives and a Senate. Area 25,382 sq. m. Pop. 6,657,339. Capital—*Colombo.*

CHILE—A democratic State lies on the west coast of South America. In Chile, the only natural nitrate in the world is found. So sixty per cent of the world's iodine is obtained as a by-product of nitrate processing. World's largest copper reserve is in Chile area 286,323 sq. m. Pop. 5,023,539. Capital—*Santiago.*

CHINA—Republic of Asia since 1912. It is second in size and first in population among the countries in the world. It occupies a vast area in south-east Asia ; most densely populated country in the world. Soviet-type of government has been established by the communists in 1949 who control whole of China except Formosa. The Constitution of the Peoples' Republic was accepted in 1949. According to this, the supreme authority is an All-Chinese People's Congress to be elected by universal suffrage with the Central People's Government Council as the chief legislative organ. Area 3,858,900 sq. m. Pop. (estimated) 475,000,000.

Columbia—South American Republic located in north-west South America ; area 440,000 sq. m. Pop. 11,294,844. Capital—*Bagota.*

COSTA RICA—is the most southern State of Central America ; area 23,000 sq. m. Pop. 81,3,000. Capital—*San Jose.*

CUBA—The *Pearl of Antilles* is the largest island in the West Indies. It is the second largest cane sugar producer in the world. The President is elected for a four year term by direct popular vote. The Cabinet though selected by the president is responsible to the Congress. Area 44,217 sq. m. Pop. 5,415,0z0. Capital—*Havana.*

CYRENAICA—is situated in the former Italian colony of Libya. It gained independence on Sept. 16, 1949 due to its siding with the British during World War II.

CZECHOSLOVAKIA—Republic of Central Europe established in 1918. It is an amalgamation of Czech territories of Bohemia, Moravia, and Silesia and the Slovak territory which was previously a part of Hungary. It has a Soviet-type constitution promulgated on June 8, 1948. There is an unicameral Parliament, the supreme organ of the State with control over Courts and Civil Service. The government is headed by the President elected by Parliament for a seven year term and the Prime Minister and his cabinet, who are appointed by the President but are responsible to the President. Czechoslovakia possesses one of the richest territories in Europe, both in the matter of natural resources and industrial developments. Area 49,330 sq. m. Pop. 12,519,000. Capital—*Prague.*

DANZIG—Free city of ; became a free city under the League of Nations ; was occupied by the Germany in the war against Poland (1939) ; area 754 sq. m. Pop. 497,550.

DENMARK—Kingdom of north Europe ; The Government is a constitutional hereditary monarchy. Legislative authority rests jointly, with the King and the two house Rigsdag. Danish dairy products are world famous and the country in normal times exports more butter than any in the world ; area 16,570 sq. m. Pop. 4,313,400. Capital— *Copenhagen.*

DOMINICIAN REPPBLIC—The Republic (formerly San Domingo) occupies the eastern two-thirds of the island which Columbus named La Espanola (now Hispaniola) when he discovered it on his first voyage in 1492, lies east of Cuba between Atlantic Ocean and the Caribbean Sea ; area 19,300 sq. m. Pop. 2,167,000. Capital —*Cuidad Trujilo.*

EIRE—Is now sovereign independent and democratic state from 1949 and the constitution affirms the right of the Irish nation to choose its own form of government; to determine its relations with other nations and to develop its life in accordance with its own genius and traditions. The head of the State is the President elected by the direct vote for 7 years. The parliament consists of the Dail elected by the universal suffrage and proportional representation and the Senate of 60 members. Area 6,601. Pop. 2,997,000. Capital—*Dublin*.

ECUADOR—Republic in the Pacific coast of South America: area 104,510 sq. m. Pop. 3,079,000. Capital—*Quito*.

EGYPT—An independent Kingdom of N.-E. Africa; Republican form of government was established in 1953. It is the largest and the most influential of Arab States. The Constitution provides for a Parliament composed of a Senate and a Chamber of Deputies; area 383,000 sq. m. Pop. 20,729,000. Capital—*Cairo*.

FINLAND—Republic in N.-W. Europe declared an independent state in 1917; fringed by islands and dotted with lakes: The State was an autonomous Russian State, but proclaimed an independent state in July 29, 1917 and a republic in 1919. There is a single legislative chamber, the Diet. One of the chief occupations in Finland is lumbering: articles made from wood include matches, constructional timber, paper and cellulose. The President is chosen for a term of six years; area 134,324 sq. m. Pop. 4,231,279. Capital—*Helsinki*.

FRANCE—Republic of Western Europe bordering on Spain in the S. W., Italy, Switzerland and Germany in the E., Belgium and Luxemburgh in the N.E., and facing the Mediterranean, Atlantic Ocean and English Channel on the S. W. and N. respectively. A new constitution was passed in 1946 establishing Fourth Republic: France is now a secular, democratic and social republic. The dominant power in the new republic is the National Assembly whose members are elected by universal direct suffrage. There is also a Council of the Republic, subordinate to the Assembly which is elected by the communal and departmental Councils through universal indirect suffrage. The French Constitution of 1946 provided for the establishment of the French Union, consisting of the French Republic and (metropolitan France and the overseas departments, territories and trusteeship) and associated territories and States. The two Houses together elect the President of the Republic for a 7-year term but his choice of premier and the latter's choice of cabinet ministers require Assembly ratification. Area 212,741 sq. m. Pop. 42,400,000. Capital—*Paris*.

GERMANY—After the fall of Germany in the World War II, for the purposes of control, Germany was divided in 1945 into four national occupation zones each headed by a military governor assisted by appropriate supervisory and operating staff. Efforts to unify Germany were totally unsuccessful, and the western powers were unable to agree with U.S.S.R. on any fundamental issue. So on

May 31, 1948 U.S. Britain, France and Benelux countries agreed to set up a German State comprising the three western zones. The *Federal Republic of Germany* came into formal existence on September 21, 1949 when Allied High Commission transferred to it the administration of the U. S. British and French Zones of occupation of Germany. On May 8, 1949 the German Constituent Assembly at Bonn approved the constitution for Western Germany. The supreme authority is vested in the governments of the U.S.A., United Kingdom and France and is exercised through the Allied High Commission. The powers of the Commission is defined in the Occupation Statute of 1949. Subject to the provisions of the Statute, the republic has full legislative, executive and judicial powers in accordance with the basic law or Constitution. Any law of the republic is however subject to veto by the Commission. Foreign policy, disarmament and demilitarization, Ruhr control, reparation, decartelization and security of Allied occupation forces are reserved in the hands of the Commission. The Constitution provides for a federal form of government headed by a president elected every five years by a federal convention. The actual executive power is in the hands of the cabinet. Area 94,634 sq. miles ; Pop. 47,575,658. Capital—*Born.*

The *German Democratic Republic* comprises the Soviet Zone of occupation of Germany. It was proclaimed on Oct. 7, 1949 with its seat at Berlin on the basis of a constitution adopted on May 30, 1949. The constitution is of Soviet nature and is under the complete control of the Communists. Soviet government supervision is exercised by the Soviet Control Commission. Area 41,700 sq. miles; Pop. 17,313,700; Capital—*Berlin.*

Berlin—the capital of the pre-war Germany is occupied by the forces of U. S. the U. K., France, U. S. S. R., each having its own sector of occupation. The supreme authority in Western Berlin is exercised by the Allied High Commission known as Kommandatura. Supreme authority of the eastern portion of Berlin is exercised by Soviet Control Commission.

GREECE—is located at Balkan peninsula in south-western Europe stretching down into Mediterrarean Sea. Greece is a constitutional hereditary monarchy. Nominal executive power is vested in the king but the government is administered by the Council of Ministers, headed by the Premier who must enjoy the Assembly's confidence. Area 51,182 sq. m. Pop. 7,603,599. Capital—*Athens.*

GUATEMALA—Republic of Central America : area 45,452 sq. m. Pop. 2,787000. Capital—*Guatemala City.*

HAITI—It occupies the western third of the island known as Hispaniola, the second largest of the greater Antilles. It is the only Negro republic in the Western hemisphere; area 10,748 sq. m. Pop. 3,111,000. Capital—*Port-au-Prince.*

HONDURAS—Republic of Central America; area 59,145 sq. m. Pop. 1,533,625. Capital—*Tegucigalpa.*

HUNGARY—European Republic formed out of Austro-Hungary; it is the abode of the Magyars; The Soviet type of constitution was adopted by the Parliament on August 18, 1949 which declared Hungary to be a 'people's republic'. The supreme organ of State control was declared to be the Parliament with deputies elected even 4 years by direct vote. Area 35,911 sq. m. Pop. 9,210,150. Capital—*Budapest.*

ICELAND—Island in the North-Atlantic Ocean, now republic; it is close to the Arctic circle in the North Atlantic; constitutionally, the president is elected for four years by popular vote. Executive power of the State resides in the prime minister and his Cabinet Iceland has no army or navy. Area 40,479. Pop. 121,478. Capital—*Reykjavik.*

INDIA—It is now self-governing independent Republic from 15th August, 1947. The dominion is one of the largest and richest nations in the world. Area 1,217,000 sq. m. Pop. 356,891,624. Capital—*New Delhi.*

INDO-CHINA—Formerly French Indo-China, it consists of the following associated states within the French Union: (1) Viet Nam composed of the provinces of Tonking, Annam and Cochin-China (2) Kingdom of Laos including the former protected Kingdom of Luang prabang (3) Kingdom of Cambodia. The native inhabiting the Southern Highlands of Annam (Viet Nam) have a special statue, being directly administered by the Head of the State; Area 286,000 sq. m.; pop. 27,030,000

INDONESIA—is comprised of East Indies Islands of Java, Sumatra, Central and Southern Borneo, Celebes, Moluccas and Madura. Under the statute of the Union, the Netherlands and Indonesia both are sovereign independent nations joined together in the person of the Queen of the Netherlands. Sovereignty was transferred to the Indonesian government on 27th Dec. 1949. Area 218,365 sq. m. Pop. 60,412,962. Capital—*Jakarta.*

IRAN—Kingdom of Western Asia, also known as Persia; Iran is a constitutional monarchy. Executive power is exercised by a cabinet headed by the prime minister who is appointed by the Shah and is responsible to the *Majlis* (Parliament) which has 136 popularly-elected members. The Shah has power to dissolve the majlis; area 634,413 sq. m. Pop. 18,772,000. Capital—*Teheran.*

ISAREL—The Jewish State in Palestine was established in 1948 in fulfilment of the aspirations of Zionism and following a decision of U.N. Assembly on the partition of Palestine between Jews and Arabs. Israel is a democratic State. It occupies the major portion of Palestine. It lies on the western edge of Asia bodering on the Mediterranena Sea. On Nov. 2, 1947, British government made a declaration, known as *Balfour Declaration* which viewed with favour the establishment in Palestine of a home for the Jewish people. This principle was incorporated in the mandate to Britain which came into force in 1923. The British mandate on Palestine ended at mid-night on May 14, 1948 when the Jewish Council proclaimed a Jewish State of Israel. This led to the war against Israel by Arab States. But armistice agreement was signed under U.N. auspices which left Israel as an independant State. Area 8,050 sq. m. Pop. 1,257,000. Capital—*Tel Aviv.*

IRAQ—Arab Kingdom in the Middle East; formerly known as Mesopotamia; now one of the states lying between Arabia and Iran: created as a result of World War I when under the treaty of Lousanne (1923), Turkey renounced the sovereignty over Mesopotamia. The Constitution is a hereditary monarchy with a Senate of 28 members and a Chamber of Deputies of 141 members elected by manhood suffrage; area 116,000 sq. m. Pop. 5,100,000. Capital—*Bagdad.*

ITALY—Republic of Europe, stretching from the Alps southeast into Mediterranean with the islands of Sicily, Sardania, Elba and 70 smaller ones; under the 1947 constitution Italy is "democratic Republic founded on work. Sovereignty belongs to the people who exercise it in the forms and within the limits of the Constitution". The President is elected for seven years by parliament in joint session with regional delegates. The Cabinet headed by the premier and nominated by the president must enjoy the confidence of parliament. Italy is ordinarily the world's largest producer of mercury; it is also an important producer of sulphur. Area 131,000 sq. m. Pop. 46,272,000. Capital—*Rome.*

JAPAN—Island Empire of Asia; is situated in the North Pacific Ocean off the coast of China and Siberia. It was under the control of Allied power upto 1951. The new constitution effective May 3, 1947, made drastic changes in Japan's political system. The Emperor retains only ceremonial functions and the executive power is vested in the cabinet, headed by the premier and collectively responsible to the Diet. Law-making power is vested solely in the Diet composed of two houses—House of Representatives and the House of Councillors. A bill of rights guarantees certain basic liberties; women are enfranchised for the first time. Sovereignty formerly vested in the Emperor, is now vested in the people and the House of the People can override the veto of the House of Councillors by a two-thirds vote. Area 681,273 sq. m. Pop. 83,199,637. Capital—*Tokio.*

JORDAN **(Hashemite Kingdom of)**—was formerly known as Trans-Jordan, is now an independent state in western Asia. Jordan was conquered by the British in the World War I and was separated from the Palestine mandate in 1920 and in 1921 was placed under the rule of Abdullah ibn Hussain. In 1923 Britain recognised Jordan's independence subject to the mandate. During World War II Jordan co-operated completely with Britain. On March 22, 1946 Britain abolished the mandate and recognised the full and complete independence of Jordan. Jordan is a constitutional monarchy. The King rules with the aid of a cabinet responsible to parliament which consists of the popularly elected Chamber of Deputies and a Senate. Area 39,460 sq. m. Pop. 619,000. Capital—*Amman.*

KOREA—East Asiatic country on a peninsula between Manchuria and Japan. By a treaty of Aug. 23, 1910, Korea was annexed to Japan and became part of Japanese Empire. Free and Independent Korean Republic was assured by the Yalta and Potsdam Agreement. Korea was occupied by troops of the U.S.A. and U.S.S.R. in 1945. But after the surrender of Japan, U.S.A. U.K. and Soviet Union agreed at Moscow in Dec. 1945 that Korea should be placed under the trusteeship of those three powers and China for a period not to exceed five years. The agreement proved to be impossible. U.S. referred the matter to the U.N. General Assembly which set up a commission in 1947 to aid in the formation of a Government. U.S.S.R. boycotted the commission, but elections were held for a National Assembly in the U.S. Zone in 1948. The Assembly adopted a constitution setting up a one house National Assembly with a Government headed by the President. It was recognised as legal Government of Korea by the U.N. General Assembly on Dec. 12, 1948. On May 1, 1948 formation of a North Korean "Peoples Republic" in the Soviet Zone north of the 38th parallel was announced. It was a typical Soviet State under a constitution adopted on Sept. 2, 1948 by a "Peoples Assembly". On June 25, 1950 South Korea was attacked by North Korea. U.S. armed intervention was ordered by the American President and on the same day the U.N. evoked military sanctions against North Korea.

LIBERIA—Independent Negro Republic of West Africa on the Guinea Coast ; It is Africa's only republic ; area 43,000 sq. m. Pop. 2,500,000. Capital—*Monrovia.*

LIECHTENSTEIN—is a principality between Austria and Switzerland. 59,61 sq. m. Pop. 13,756. Capital—*Vaduz.*

LEBANON—Is now an independent State. It is now situated in the Levant occupying a strip along the Mediterranean littoral in south-west geographical Syria ; area 4475 sq. m. Pop. 1,303,000. Capital—*Beirut.*

LIBYA—It stretches along the northern coast of Africa between Tunisia and Egypt. The U.N. General Assembly voted on Nov. 21, 1949 that Libya should become independent by 1952 and a U.N. Commissioner assisted by an advisory council was appointed to prepare the way for self-government. Following the adoption by the Constituent Assembly of a constitution, the independence of the country was proclaimed on Dec. 24, 1951. Under the constitution, Libya is a hereditary monarchy with a federal form of Government. Tripolitania, Cyrenaica and the Fezzan are the constituent provinces.

LUXEMBERG, GRAND DUCHY OF—Luxemberg is a European Grand Duchy situated between Germany, Belgium and France. It was given its present rank as principality by the Congress of Vienna in 1815. Area 1,000 sq. m. Pop. 290,992. Capital—*Luxemburg.*

MONGOLIAN PEOPLE'S REPUBLIC—is also known as Outer Mongolia. In 1915 Mongolia threw off its allegiance to China and by a treaty was recognised as an autonomous republic. Negotiations with Russia after 1917 revolution led to an alliance and by Treaty, U.S.S.R. acknowledged the sovereignty of China over Outer Mongolia, but by the Russian-Chinese treaty of August 25, 1945 China recognised the complete independence of Mongolia. The government of the republic is strikingly similar to Soviet system. Area about 1,750,000 sq. m. Pop. about 5,000,000. Capital—*Ulan Bator Khoto.*

MEXICO—A Federal republic of 29 states in N. and S. America; The President, popularly elected for six years and ineligible to succeed himself, governs with a cabinet of his appointed ministers. The Federal Congress has two houses—Chamber of Deputies and Senate. Each of the 29 States has considerable autonomy with a popularly elected governor, legislature and local judiciary. Mexico has a great mineral wealth and produces petroleum, silver, gold, copper, lead, quicksilver, iron and coal. She is the world leader for the production of silver, sisal, hemp and chicle for chewing gum. Capital—*Mexico City.*

MONACO—A tiny independent principality in south of France ; is located on the Mediterranean with land frontiers joining France at every point ; It is noted for an exceptionally mild climate and magnificent scenery. Area 375 acres m. Pop. 20,000. Capital—*Monaco.*

MOROCCO—A country of North Africa. The Empire theoretically is an absolute monarchy, but the country is divided into three zones—the *French*, the *Spanish* and the *International Tangier zone.* The country is under French protectorate which encompasses the whole of Morocco from Algerian frontier to the Atlantic Ocean and from Sahara Desert in the south to the boundary of the Spanish zone in the north. The Spanish zone is the northern strip ; area 161,691 sq. m. Pop. 9,082,900. Capital—*Rabat.*

MALAYA, FEDERATION OF—Before Japanese invasion in 1941-42, part of the Malaya Peninsula and number of adjacent islands were known as Strait Settlement. It was a British Crown Colony. After Malaya became free from Japanese control, the people made demands for complete independence. So new treaty signed on January 21, 1948 established Malaya Federation consisting of the four former Federated Malay States of Perak, Selangor, Negri Sembilian and Pehang, the five former Unfederated States and the two British settlements of Malacca and Penang with Province Wellesley. Singapore became a separate Crown colony in 1946. East State in the Federation is ruled by its native ruler subject to the advice of the British High Commissioner, except in religious matters. Area 50,650 sq. m. Pop. 5,000,000. Capital—*Kuala Lumpur.*

NEPAL—A land-locked country lying between India and Tibet, Nepal has two great distinctions of containing Mt. Everest, 29,002 (ft.) the tallest mountain peak of the world and some of the toughest fighting men in the world—Gorkhas. After a revolution in 1950, a representative government has been established in 1950 with King as constitutional head. The traditional supreme authority of the Prime Minister no longer exists. Area 54,000 sq. m. Pop. 7,000,000. Capital—*Katmandu.*

NETHERLANDS—Kingdom in North western Europe. It is a constitutional and hereditary monarchy. Executive power is vested exclusively in the sovereign while the legislative power vests with the sovereign and the States-General. Area 13,514 sq. m. Pop. 10,212,684. Capital—*Amsterdam.*

NICARAGUA—Largest central American Republic lying between the Caribbean Sea and Pacific Ocean ; area 60,000 sq. m. Pop. 1,053,000. Capital—*Managua.*

NORWAY—Kingdom of north Europe ; Norway is a constitutional and hereditary monarchy with succession in direct male line. The King's executive power is exercised by a Council of State or Cabinet consisting of prime minister and at least seven other Councillors. The 150 members of the Storting are popularly elected for a term of 4 years under proportional representation. In the North Cape area is the phenomenon known as *midnight sun.* The sun does not set from the middle of May until the end of July, nor does it rise above the horizon approx. from Nov. 18 to Jan. 23. Varicoloured Northern Lights are visible in winter. Forests cover nearly one-fourth of the area. They are the principal sources of wealth, and the paper and wood pulp industries flurish. Area 125,193 sq. m. Pop. 3,156,950. Capital—*Oslo.*

PAKISTAN—A new Muslim State was formed by the partition of India on August 15, 1947. It is the world's largest and most influencial Muslim State. Pending the passing of the new constitution, Pakistan has now a provisional Government which is federal in nature. The Governor-General represents the Crown and is advised by the Prime Minister and his Cabinet who is responsible to the constituent assembly which has both legislative and constitution making powers. It is divided into two parts ; western Part is made up of Baluchistan, Sind and N. W. F. Province and the western part of the Punjab, princely State of Bhawalpur and a few other small muslim states, while Eastern Part consists of the Eastern half of Bengal and the Sylhet District of Assam. Over half of the population is concentrated in East Bengal which contains only 16 p.c. of the total area. Area 350,000 sq. m. Pop. (1951) 75,687,000. Capital—*Karachi.*

PANAMA, REPUBLIC OF—It occupies the entire Isthmus of that name connecting North and South America. Panama Canal is the country's big economic asset. Area 31,800 sq. m. Pop. 802,278. Capital—*Panama.*

PARAGUAY, REPUBLIC OF—South American Republic ; Since the adoption of the 1940 constitution, Paraguay is a semi-authoritarian republic Area—154,165 sq. m. Pop. 1,600,000. Capital—*Asuncion.*

PERU—Republic of South America situated on the Pacific coast of South America. The President is elected for 6 years by direct vote of the people. Congress is composed of a Senate and of a Chamber of Deputies. Peru has a vast mineral resources. It ranks fourth in world silver production and mines about 25 p.c. of the world's vanadium. Area 482,133 sq. m. Pop. 8,404,933. Capital—*Lima.*

POLAND—Independent Republic of central Europe. Poland is a republic with a president elected for 7 years by the one-chamber Sejm or Diet. There is also a Council of State and a Cabinet, the latter headed by the Prime Minister. Area 18,169 sq. m. Pop. 20,976,926. Capital—*Warsaw.*

PHILIPPINES, REPUBLIC OF—is the largest island group in the Malaya Archipelago. It is an archipelago of approximately 7,083 islands lying about 500 miles off the south-east coast of Asia. The largest islands are Luzon, Mindanao, Samar, Negros, and Palawan. The independence of the Philippines was proclaimed on July 4, 1946 in accordance to the Act passed in the American Congress in 1934. The Philippines have a republican form of Government based on that of the Unites States. Executive power is exercised by the President popularly elected for a 4-year term and assisted by a Cabinet appointed by him. The popularly elected Congress has two houses—the Senate with 24 members and the House of Representatives with 100 members. Area 114,834 sq. m. Pop. 19,557,000. Capital—*Quezon City.*

PORTUGAL—Republic of S. W. Europe. Under the constitution of 1933, Portugal is a Corporative republic. The President is elected popularly for term of seven years; the National Assembly of 120 members for a term of 4 years. There is also a Corporative Chamber which handles economic, social and some legislative matters. Area 35,413 sq. m. Pop. 8,490,455. Capital—*Lisbon.*

RUMANIA—Independent kingdom of the Balkans; according to new Constitution of 1948 Rumania is a "People's Unitary and Independent State". It is socialistic in nature. The highest authority of the government is Grand National Assembly; Virtually all the powers formerly vested in the King are exercised by a 19-member, presidium of the National Assembly; certain area ceded to Russia; area 91,934 sq. m. Pop. 16,000,000. Capital—*Bucharest.*

SALVADAR—The smallest and most populous central American republic, bounded by Guatimala and Honduras on the north and the Pacific on the south and extends along the Pacific Coast of Central America for 160 miles; area 13,176 sq. m. Pop. 1,858,000. Capital—*San Salvadar.*

SAN MARINO, REPUBLIC OF—Independent republic bounded by Italian territory, lying some 12 miles. S. W. of Rimini. It claims to be the oldest state of Europe having founded in the 4th century and is one of the world's smallest states; area 38 sq. miles. San Marino, the capital is situated on a spur of the Apennines. Government is by a council of 60 and the State is under Italian protection. Pop. 13, 000.

SOUTH AFRICA, UNION OF—The Union extends from the southermost point of the African continent to the course of Limpopo region. It is the richest gold and diamond producing country in the world. It is a self-governing dominion. Area 472,494 sq. m. Pop. 11,790,000. Capital—*Pretoria.*

SPAIN—Republic of S. W. Europe. It is separated from France by the Pyrennees mountain. It was proclaimed a republic on April 14, 1931. Spain has a dictatorship form of government under General Franco. Franco is head of the State, national chief of the Falange party, prime minister and *caudillo* (leader) of the Empire. Practically, the country is ruled by the Cabinet (appointed by Franco), the national council of the Falange Party and, to a lesser extent, the Cortes (Parliament). On April, 1947, Franco himself declared Spain a kingdom again. He was to remain head of the State, and upon his death or incapacity, the government and a Council of the Realm constituted by the law are to nominate as King "that person of royal blood who is most qualified by right" subject to the approval of the Cortes. Area 194,945 sq. m. Pop. 28,286,518. Capital—*Madrid.*

SWEDEN—Kingdom of North Europe, Government is a constitutional hereditary monarchy. Executive and judicial authority is vested in the King alone but his resolutions must be taken in the presence of the Council of State (Cabinet) headed by the Prime Minister ; the Council is appointed by the King, but is responsible collectively to the Riksdag (Parliament). The Riksdag has an upper chamber elected indirectly by the provincial and municipal councils for eight years. The lower chamber of 230 members is directly elected by popular vote for four years. Sweden is an important source of high grade iron ore and also exports lumber, pulp and paper and is known for its special technical industries (ball bearings and electrical appliances). Area 173,436 sq. m. Pop. 7,046,920. Capital—*Stockholm.*

THAILAND—Kingdom of South-eastern Asia. It is a constitutional hereditary monarchy. Under the constitution of 1949, there is a bicameral legislature ; area 198,247 sq. m. Pop. 17,987,000. Capital—*Bangkok.*

SWITZERLAND—is the federal republic of Central Europe and is a federation of 22 sovereign cantons. Each canton has its own legislature, executive and ludiciary Department with the right to veto over federal legislation through referendum. The Federal Assembly has two houses—a council of States of 44 members and a National Council of 196 members elected for four-year terms. Seven members of the Cabinet are elected for four years by the federal assembly which also elects the Swiss President from among its own members for a period of one year. On the basis of international treaties and guarantees, Switzerland is perpetually neutral. German, France and Italian are official languages of Switzerland. Dairying and stock-raising are the principal industries. Area 15,940 sq. m. Pop. 4,650,000. Capital—*Berne.*

SYRIA—It is now an Arab Republic in the Levent. It was formerly under Turkish Empire, but was made an independent state by the Treaty of Severes in 1920 and divided into the States of Syria and greater Lebanon. Both were administered under a French mandate (1920-1921). A French Syrian treaty establishing an independent Syria under French military supervision was signed in 1936 and in 1941 Syria was proclaimed a republic. In 1943 French government withdrew entirely from Syria. Area 735,877 sq. m. Pop. 3,252,664. Capital—*Damascus.*

TIBET—A lofty land of Central Asia, lying N. and N. E. of the Himalayas, mainly a high table-land. Tibet was so long a nominal dependency of China under the independent rule of Dalai Lama, but in 1950 Chinese Communist government sent their liberation forces to Tibet and in 1951 have established their supremacy. The trade with India is mostly carried on through various passes. It is priest state sustained by the Lamas who form 20 p.c. of the population. Their religion is Lamaism—a variant of Buddhism. Since 15th century the government is carried by double papay—Panchen Lama (also known as Tashi Lama) and Dalai Lama. The two top Lamas together govern Tibet. They are about equal in rank, although Dalai Lama has to revere Panchen Lama as his spiritual superior. As a political head, Dalai Lama is of greater importance. Area 463,200 sq. m. Capital—*Lhassa.*

TRIESTE—The free territory of Trieste under U. N. protection is bounded in the north by Italy, on the east and south by Yugoslavia and on the west by the Gulf of Panzano, an arm of the Adriatic Sea. This free territory was set up under the terms of the Peace Treaty with Italy in 1947 for the sake of compromise between the conflicting claims of Italy and Yugoslavia to this town and placed under the United Nation's protection. Area 293 sq. m. Pop. 378,000.

TURKEY—Republic of Asia and Europe. The European territory was reduced to the city of Constantinople and a narrow strip of country around it. The Turkish State is defined as "republican, nationalist, populist, etatist, secular and revolutionary." The president is chosen from the deputies of the National Assembly ; his term of office is identical with the life of each Assembly. 487 members of the Assembly are elected by universal suffrage for a term of four years. Area 295,185 sq. m. Pop. 20,902,628. Capital—*Ankara.*

UNITED STATE OF AMERICA—Federal Republic of North America extending from the Atlantic to the Pacific and from Canada to Mexico with outlying areas in Alaska, Puerto Rico, Hawaii, Guam and other Pacific islands. United States consists of 48 States and the federal district of Columbia. U.S.A. has a federal government. The Federal Government is based on the separation of powers—the President, House of Congress and the Supreme Court being designed to balance and restrain each other—hence the famous concept of 'checks and balances'. Each State is self-governing in local matters, but confides to the Central Government at Washington the control of foreign affairs and the army and navy. Police, education, public health, etc., remain within the scope of the individual states. The capital is Washington which belongs to no state, being administered directly by the Federal Government. Executive power is vested in the President elected by popular vote every four years. He chooses the members of the Cabinet, who are not (as in England) members of the legislature. Legislative power is vested in Congress, composed of a two houses; the Senate with two members from each State elected to serve six years and the House of Representatives composed of a number of members varying according to the census elected for two years. There is adult suffrage. The third main component of the constitution is the Supreme Court at Washington. Area 3,619,739 sq. m. Pop. 153,679,623. Capital—*Washington.*

U.S.S.R.—Union of Soviet Socialist Republics composed of Russian, Ukrainian, White Russian, Transcaucasian, Turkoman, Tadjākandubeg Republics. It is the largest country in the World, stretches across two continents from the North Pacific Ocean to the Gulf of Finland. Vast territory of U.S.S.R., one sixth of the earth's land surface, contains every phase of climate except the distinctly tropical and a varied topography. Under 1936 Constitution, U.S.S.R., is a Socialist State of workers and peasants in which all power belongs to the working people as represented by the Soviets (Council) of Working People's Deputies, while its economy is based on the "Socialist ownership of the instruments and means of production", U.S.S.R. is a Federal State formed on the basis of a voluntary union of equal Soviet Socialist Republics; every Republic has the right to secede from the U.S.S.R. The highest organ of the State is "Supreme Soviet of the U.S.S.R." which exercises exclusively the legislative power. It consists of two Chambers, *Soviet of the Union* and *Soviet of Nationalities.* The Supreme Soviet delegates own most of its power to its *Presidium* which acts as a kind Collective President of the U.S.S.R. between the sessions. The highest executive and administrative authority of the State is the Council of Ministers of U.S.S.R. Area 8,707,870 sq. m. Pop. 194,387,000. Capital—*Moscow.*

URUGUAY—Smallest republic in South America area 72,172 sq. m. Pop. 2,540,466. Capital—*Montevideo.*

VATICAN CITY—The independent Sovereign State, created by the Treaty of 1929, of which the Pope is the head. It coveres 109 acres in the heart of Rome and includes Vatican Palace, the Pope's official residence and the basilica and square of St. Peters. The Sovereign Pontiff appoints a layman as Governor and there is a nominated consultive council. Area 109 acres. Pop. 1,800.

VENEZUELA—is the northernmost state of South America; area 352,143 sq. m. Pop. 4,987,716. Capital—*Caracas.*

YUGOSLAVIA—is a federal republic of S. E. Europe in the Balkan peninsula and is a federation comprising the People's Republics of Serbia, Croatia, Slovania, Bosnia, Harzagina and Macedonia. In 1945 Constituent Assembly proclaimed Yugoslavia a peoples' republic under the name of Federal Peoples Republic of Yugoslavia; area 99,182 sq. m. Pop. 15,772,098. Capital—*Belgrade.*

UNITED KINGDOM—The United Kingdom consisting of England, Wales, Scotland, Northern Ireland, Isle of Man and the Channel Islands lies off the north-west corner of Europe. The United Kingdom is a constitutional monarchy with a king and a Parliament consisting of two houses: the House of Lords and the House of

Commons. Supreme legislative power is vested in parliament which holds office for five years unless sooner dissolved. The executive power of the Crown is exercised by the Cabinet headed by the prime minister. The Prime Minister normally the head of the party commanding a majority in the House of Commons, is appointed by the Sovereign with whose consent he in turn appoints the rest of the Cabinet. All the ministers must be members of one or the other house of Parliament. Area 94,279 sq. m. Pop. 50,033,000. Capital —*London.*

VIET-NAMA—A republic included in the federation of Indo-China, French Union. It was established in 1946 to include Tonkin, Annam and Cochin-China with Saigon as its capital. Area 127,000 sq. miles. Pop. about 22,812,000.

POLITICAL INFORMATION

RULERS OR HEADS OF GOVERNMENTS OF THE WORLD

Country	*Ruler*	*Executive Head.*
Afghanistan	Zaher Shah, *King.*	Shah Mahmud Ghazi, P.M.
Arabia-Saudi	Abd-el-Aziz, *King.*	
Australia	W. J. McKell, *G. G.*	R. G. Menzies, P.M.
Austria	Dr. T. Koerner, *P.*	Dr. Julin Roab, Chancellor.
Argentina	Juan Peron *P.*	
Belgium	Baudouin, *King.*	M. Pholien, P.M.
Burma	Sao Shwe Thaik *P.*	Thakin Nu, P.M.
Bhutan	Jig-me Wang-chuk.	
Brazil	G. Vargas, *P.*	
Bulgaria	G. Damianov *P.*	V. Chervenkov, P.M.
Canada	Viscount Alexander, *G. G.*	Louis St. Laurent, P.M.
Chile	Carlos Ibanez, *P.*	
China	Mao Tse Tung, *Chairman.*	Chow En Lai, P.M.
Ceylon	Lord Soulbury, *G. G.*	S. Senanake, P.M.
Columbia	L. Gomez, *P.*	
Czechoslovakia	Antonin Zapotocky, *P.M.*	Vilem Siroky, P.M.
Denmark	Frederick, IX, *King.*	Erik Eriksen, P.M.
Egypt	Prince A. Moniem, *Regent.*	Gen. M. Naguib, P.M.
Eire	Sean O'Kelly, *P.*	De Valera, P.M.
Finland	John Paasikivi, *P.*	U. K. Kokkonen, P.M.
France	V. Auriol, *P.*	Rene Pleven, M.P.
W. Germany	Theodor Heus, *P.*	Dr. K. Adenauer, Chancellor.
Gt. Britain	Elizabeth II, *Q.*	W. S. Churchill, P.M.
Greece	Paul I., *King.*	S. Venizelos, P.M.
Hungary	Sandor Ronai, *P.*	Istvan Dobi, P.M.
Iceland	S. Bjornsson, *P.*	Steinthorsson, P.M.
Iran (Persia)	Mohammed Raza Pahlevi	Fazlollah Zahedi, P.M.
Israel	Dr. C. Weizmann, *P.*	Mr. Ben-Zvi, P.M.

Rulers or Heads of Governments of the World—(*Concld.*)

Country	*Ruler*	*Executive Head.*
India	Rajendra Prasad, *P.*	J. L. Nehru, P.M.
Indonesia	Dr. A. Scekarno, *P.*	Dr. Ali Sastroamidjojo, P.M.
Iraq	Faisal II., *King.*	Nuri al Said, P.M.
Italy	Luigi Einaudi, *P.*	Juiseppe Pella.
Japan	Hirohito, *Emperor.*	S. Yoshida, P.M.
Korea (South)	Lee Bum Suk, *P.*	Dr. S. Rhee, P.M.
Luxemburg	Charlotte, *Grand Duchess.*	P. Dupong, P.M.
Liberia	W. V. Tubman.	
Mexico	Muigal Aleman, *P.*	
Morocco	Sidi Mohammed ben Moutay Arafa, *Sultan.*	
Nepal	Maharaja Tribhuban Bir Bikram	
Netherlands	Juliana, *Queen.*	William Drees, P.M.
Norway	Haakon VII., *King.*	E. Gerhardsen, P.M.
Pakistan	Ghulam Mohammad, *G. G.*	Mahomed Ali, P.M.
Peru	Manuel A. Odria, *P.*	
Philippine Is.	E. Quirino, *President.*	
Portugal	Gen. Craveiro Lopes, *P.*	Dr. A. O. Salazar.
Poland		
Rumania	C. Parhon, *P.*	P. Groza, P.M.
South Africa	G. B. Van Zyl, *G. G.*	Dr. D. Malan, P.
Spain	Genl. Franco, *Regent.*	
Sweden	Gustaf V., *King.*	T. Erlander, P.M.
Switzerland	E. Von Steiger, *P.*	
Syria	H. Attasi, *P.*	Hasan Bay Hakim, P.M.
Thailand	R. Aduldet, *King.*	L. P. Songgram, P.M.
Turkey	Celal Bayar, *P.*	Adnan Menderes, P.M.
U.S.S.R.	Marshal Voroshilov, *P.*	Georgi Malenkov, P.M.
United States	Gen. D. Eisenhwer, *P.*	
Vatican City	Pius XII, *Pope*	
Yugoslavia	Ivan Ribar, *President*	Josip Borz, P.M.

AMERICAN PRESIDENTS

	Name	*Politics*
1789-1797	George Washington	Fed.
1797-1801	John Adams	Fed.
1801-1809	Thomas Jefferson	Rep.
1809-1817	James Madison	Rep.
1817-1825	James Monroe	Rep.
1825-1829	John Quincy Adam	Rep.
1829-1837	Andrew Jackson	Dem.
1837-1841	Martin Van Buren	Dem.
1841	W. H. Harrison	Whig.
1841-1845	John Tayler	Whig.
1845-1849	J. Knox Polk	Dem.
1849-1850	Zachary Taylor	Whig.
1850-1853	Millard Fillmore	Whig.
1853-1857	Franklin Pierce	Dem.
1857-1861	J. Buchanan	Dem.
1861-1865	Abraham Lincoln	Rep.

American Presidents—(*Contd.*)

	Name	*Politics*
1865-1869	Andrew Johnson	Rep.
1869 1877	Ulysses Grant	Rep.
1877-1881	R. B. Hayes	Rep.
1881	James Garfield	Rep.
1881-1885	Chester Arthur	Rep.
1885-1889	G. Cleveland	Dem.
1889-1893	Benjamin Harrison	Rep.
1893-1897	G. Cleveland	Dem.
1897-1901	W. McKinley	Rep.
1901-1909	T. Roosevelt.	-
1909-1913	William H. Taft	Rep.
1913-1921	Woodrow Wilson	Dem.
1921-1923	W. G. Harding	Rep.
2913-1929	Calvin Coolidge	Rep.
1929-1933	Herbert C. Hoover	Rep.
1933-1945	F. D. Roosevelt	Dem.
1945-1952	H. S. Truman	Dem.
1952	D. Eisenhower	Rep

BRITISH PRIME MINISTERS

Sir R. Walpole (Whig)	1721
Earl of Wilmington (Whig)	1742
Henry Pelham (Whig)	1743
Duke of Newcastle (Whig)	1754
Duke of Devonshire (Whig)	1756
Duke of Newcastle (Whig)	1757
Earl of Bute (Tory)	1762
George Grenville (Whig)	1763
M'quess of Rockingham (Whig)	1765
Duke of Grafton (Whig)	1766
Lord North (Whig)	1770
M'quess of Rockingham (Whig)	1782
Earl of Shelburne (Whig)	1782
Duke of Portland (Coal)	1783
William Pitt (Tory)	1783
Henry Addington (Tory)	1801
William Pitt (Tory)	1804
Lord Grenville (Whig)	1806
Duke of Portland (Tory)	1807
Spencer Perceival (Tory)	1809
Lord Liverpool (Tory)	1812
George Canning (Tory)	1827
Lord Goderich (Tory)	1827
Duke of Wellington (Tory)	1828
Earl Grey (Whig)	1830
Viscount Melbourne (Whig)	1834
Sir Robert Peel (Con)	1834
Vist Melbourne (Whig)	1835
Sir Robert Peel (Con)	1841
Lord J. Russell (Lib)	1846
Earl of Derby (Con)	1852
Lord Aberdeen (Peelite)	1852
Viscount Palmerston (Lib)	1855
Earl of Derby (Con)	1858
Visct Palmerston (Lib)	1859
Lord J. Russell (Lib)	1865
Earl of Derby (Con)	1866
B. Disraeli (Con)	1868
W. E. Gladstone (Lib)	1868
B. Disraeli (Con)	1874
W. E. Gladstone (Lib)	1880
M'quess of Salisbury (Con)	1885
W. E. Gladstone (Lib)	1886
M'quess of Salisbury (Con)	1886
W. E. Gladstone (Lib)	1892
Earl of Rosebery (Lib)	1894
M'quess of Salisbury (Con)	1895
A. J. Balfour (Con)	1902
Sir H. Campbell-Bannerman (Lib)	1905
H. H. Asquith (Lib)	1908
H. H. Asquith (Coal)	1915
D. L. George (Coal)	1916
A. Bonar Law (Con)	1922
Stanley Baldwin (Con)	1923
J. R. MacDonald (Lab)	1924
Stanley Baldwin (Con)	1924
J. R. MacDonald (Lab)	1929
J. R. MacDonald (Nat.)	1931
Stanley Baldwin (Nat.)	1935
N. Chamberlain (Nat.)	1937
Winston Churchill (Coal)	1940
C. R. Attlee (Lab)	1945
W. S. Churchill (Con.)	1951

POLITICAL ASSASSINATIONS

1865—Abraham Lincoln, President U.S.A., April 14.
1872—Earl of Mayo, Governor-General of India.
1876—Abdul Aziz, Sultan of Turkey.
1881—Czar Alexander of Russia and President Garfield U.S.A.
1894—President Carnot of France.
1896—Shah Nazr-ud-Din of Persia.
1898—Empress Elizabeth of Austria, Sept. 6.
1900—King Humbert of Italy.
1901—President McKinley of U.S.A., September 6.
1903—King Alexander and Queen Draga of Serbia.
1905—Grand Duke Sergius of Russia.
1908—King Carlos and Crown Prince of Portugal.
1909—Prince Ito of Japan.
1911—Stolypin, Premier of Russia.
1912—Jose Canalajas, Prime Minister of Spain.
1913—King George I of Greece.
1914—Archduke Francis Ferdinand of Austria, June 28.
1918—Czar Nicholas and his family, July 16.
1918—President Paes of Portugal.
1919—President Kurt Eisner of Bavaria; Amir Habibullah of Afghanistan.
1921—Dato, Premier of Spain.
1922—I. Narutowicz, 1st President of the Polish Republic, June 1.
1922—Michael Collins, Irish Free State Premier.
1928—Ex-President Gen. Alvaro Obregon of Mexico.
1930—Premier Hamaguchi of Japan.
1932—President Doumer of France, Takeshi Inukai, Japanese Premier, May 31.
1933—Emir Faisal, King of Iraq, Sept. 9; Ion Duca, Rumanian Premier, Dec. 24; King Nadir Shah of Afghanistan.
1934—Austrian Chancellor Dr. Dollfus; King Alexander I of Yugoslavia. M. Barthou, French Foreign Minister; Col. Pieracki, Polish Minister of Interior.
1935—Huey P. Long, U. S. Senator, September 10.
1936—K. Takahasi, Finance Minister, Admiral Saito, Admiral Suzuki, Japan.
1937—General Baqir Sidqi, Dictator of Iraq, August 12.
1938—E. Von Rath of German Embassy, Paris.
1939—Rumanian Premier M. Calinescau.
1940—Leon Trotsky, Russian communist, leader.
1942—Heydrich, German Protector of Bohemia & Moravia; Admiral Darlan of France.
1934—Lord Moyne, Br. Resident Minister at Cairo.
1945—Mehar Pasha, Premier of Egypt, February 24.
1946—Ananda Mahidal, King of Siam, July 21.
1947—Gen. Aung San, Vice-President of Burma and Five Cabinet Ministers.
1948—Mahatma Gandhi, Jan. 30.
1948—Count F. Bernadotte, U.N. Palestine mediator, Sept. 17; King of the Yemen, Feb. 17.
1949—Egyptian Prime Minister Nokrashy Pasha, Dec. 28; Syrian President Hosni Ziam, Aug. 14;

Political Assassinations—(*Contd.*)

Abdul Hussain, Ex-Persian Prime Minister, November 4.

1951—General Ali Razmara, Prime Minister, Persia, Mar. 7; King Abdulla of Jordan, July; Liaquat Ali Khan, Prime Minister of of Pakistan, Oct. 16.

FAMOUS ABDICATIONS

	B.C.
Sulla, Roman Dictator	79
	A.D.
Deocletian (Roman Emp.)	305
Edward II (England)	1327
Richard II (England)	1399
Charles V (Germany)	1555
Mary Queen of Scots	1567
Christina (Sweden)	1654
Nepoleon I (France)	1814 & 1815
Louis Philippe (France)	1848
Isabella I (Spain)	1890
Abdul Hamid II (Turkey)	1909
Manoel (Portugal)	1910
Pu-Yi (China)	1912
Nicholas II (Russia)	1917
	A.D.
Constantine (Greece)	1917 & 1922
Ferdinand I (Bulgaria)	1918
Wilhelm II (Germany)	1918
Charles (Austria)	1918
George II (Greece)	1923
Edward VIII (England)	1936
Carol II (Rumania)	1940
Victor Emmanuel III (Italy)	1946
Umberto II (Italy)	1946
Michael (Rumania)	1947
Wilhelmina (Netherlands)	1948
Leopold III (Belgium)	1951

FLAGS OF COUNTRIES

Afghanistan—Green, red and black with white device in the centre.

Belgium—Three vertical bands, black, yellow, red.

Burma—Union flag is red with a canton of blue bearing a large white five-pointed star surrounded by 5 smaller stars of like pattern and colour.

China—The "gate of Heavenly peace" at Peking superimposed on the national flag with a large star and 4 small stars at the top and a wheel at the base. The whole is encircled by ears of wheat and rice.

Denmark—Red with white cross.

Egypt—Green with 6 white crescent and three 5-pointed white star between the horns.

Finland—White with blue cross.

France—The 'Tricolour', three vertical bands, blue, white, red (blue next to flagstaff).

Greece—9 horizontal bands, alternately blue and white with white cross in blue ground in corner.

Hungary—Red, white, green, arms in centre.

Indonesia—Red and White.

Iran—White bordered with green (top) and red (bottom), with arms (lion and sun) in centre.

Italy—Three vertical bands, green, white, red.

Israel—White, with two horizontal blue stripes, the Shield of David in the centre.

India—A tri-colour flag of white, green, orange with *Chakra* (wheel) in the centre.

Netherlands—Three horizontal bands, red, white, blue.

Flags of Countries—*Contd.*)

Norway—Red with white bordered blue cross.

Pakistan—Dark green, with a white vertical bar at the mast, the green portion bearing a white crescent in the centre and a five pointed heraldic star.

Portugal—Green and red with arms in centre.

Spain—Three equal horizontal bands (red, yellow and red).

Switzerland—Red with white cross.

Sweden—Blue with yellow cross.

Thailand—Five horizontal bands, red, white, dark blue, white and red. The blue band twice the width of the others.

Turkey—Red with white crescent and star.

U.S.S.R.—A Red with star above hammer and sickle.

United Kingdom—The present Union Jack is compound of three heraldic crosses *i.e.*, the cross of St. Andrew forming blue and white basis; upon which lies the red and white cross of St. Patrick: and upon the whole rests the red and white cross of St. George dividing the flag vertically and horizontally.

United Nations—White U.N. emblem (global map projected from the North Pole and embraced in twin olive branches) centred on a rectangular blue-banner.

U.S.A.—Thirteen stripes and 48 stars.

Yugoslavia—Blue, white, red.

NATIONAL DAY

Afghanistan—May 27 (Independence Day).

Australia—Jan. 26 (Australia Day).

Burma—Jan. 4 (Independence Day).

Canada—July 1 (Confederation Day).

Ceylon—Feb. 4 (Independence Day).

China—Oct. 1 (Founding of the Republic).

France—July 14 (Taking of the Bastille).

Indonesia—August 17 (Independence Day).

Israel—April 30 (Independence Day).

Italy—June (founding of the Italian Republic).

Japan—April 29 (Birthday of the Emperor).

Nepal—Dussera Day.

Netherlands—April 30 (Queen's birthday).

Norway—May 17 (Constitution Day).

Pakistan—August 14 (Pakistan Day).

Philiphines—July 4 (National Day).

Switzerland—August 1 (founding of the Swiss Confederation).

Thailand—June 24 (National Day).

Turkey—Oct. 29 (Declaration of the Republic).

U.S.A.—July 4 (Independence Day).

U.S.S.R.—Nov. 7 & 8 (October Revolution).

U. K.—Queen's official Birthday.

NAMES AND COLOURS OF FLAGS

Union Jack—British National Flag.

Old Glory—Flag of U.S.A.

Flag of Truce—White Flag.

Flag of Distress—Flown upside down.

Red Flag—Once a signal for battle, now name given to Communist and Soviet Russian Flags.

Red Cross Flag—Same as Swiss Flag but with colours reversed.

Yellow Flag—Flown on a ship with persons suffering from contegious or infectious disease.

NAMES OF WORLD'S PARLIAMENTS

Japan	..	Diet.	Turkey	..	Grand National Assembly.
U. S. A.	..	Congress.			
England	..	Parliament.	Poland	..	Sejm.
Persia	..	Majilis.	Norway	..	Storting.
French	..	National Assembly.	Switzerland	..	Federal Assembly.
Iceland	..	Althing.	Italy	..	Senate.
Netherlands	..	States-General	Spain	..	Cortes.
Bulgaria	..	Sobranje.	Denmark	..	Rigsdag.
Austria	..	Reichsrath.	Egypt	..	Barlaman.
Eire	..	Dail Eireann.	Sweden	..	Riksdag.
Yugo-Slavia	..	Skuptchina.	Israel	..	Knesset.

POLITICAL PARTIES AND GROUPS

Wafd—The nationalist party of Egypt established in 1919 by Zaghlul Pasha, the great Egyptian nationalist. Two factions split off from the *Wafd* after the death of Zaghlul in 1927—the *Saadist Party* in 1938 and the *Kotla* (block) in 1945. All Egyptian parties were nationalists in the sense that they wanted to rid the country of the British influence.

Action Franchise—A royalist extreme right-wing group in France founded in 1898.

Kuomintang—The Chinese Nationalist Party formed originally by the followers of Sun-Yet-Sen in 1905. The party aims at the establishment of a modern, democratic, national state in China. It stands for national unity, territorial integrity and a strong central government. It insists on full sovereignty of China and the abolition of any unequal treaties. It is now confined to the Island of Formosa.

Arab League—An association of Arab States formed in 22nd March, 1945. The task of the League is the strengthening of the relations between the members, political collaboration, defence of the independence of member-states, discussion of Arab affairs, co-operation in the fields of economics, finance, culture and communications. The members of the League are Egypt, Iraq, Jordan, Saudi-Arabia, Syria, Lebanon and Yemen.

Centre Parties—Parties which are more conservative than left-wing parties and more progressive than right-wing parties.

Cominform—An organisation of the Chief European Communist parties formed at Belgrade in October 1947 to co-ordinate the activities of the Communist parties on the basis of mutual agreement.

Conservative Party—One of the chief political parties of England. It is the successor of Tory Party of the 18th and 19th centuries. It is a party of the right, in favour of existing social and economic system and is opposed to socialism. Its policy is directed at the maintenance of the Empire, at the development of home agriculture and industry and at the safe-guarding of private property. The external policy of the party is traditionally nationalist and imperialist.

Revolutionary Communist Party—A minor group professing Trotskyism existing in almost all countries. They are left-wing communists more radical and revolutionary than Stalinist, official communists with whom they are in conflict.

Falangists—The Spanish Fascist Party led by General Franco.

I. L. P.—Independent Labour Party in England—a small semi-radical group in British Labour with a Marxist programme—stands between Labour Party and Communist.

Communist Party—is the world organisation of Marxist Socialists which once operated through branch national parties very loosely affiliated to the Communist International or 'Comintern', now abolished by the order of Stalin. The 'International' has again been revived under the name of 'Cominform' which is said to be the common Information Bureau of Communist Parties of nine countries of Europe.

Fianna Fail—De Valera's radical Nationalist party in Ireland.

Labour Party—It is the British Socialist Party composed of Trade Union, Socialist and Co-operative Societies which came into official existence in 1906. It aims bringing about, by legislation, changes which will benefit the poorer classes. Nationalization of basic industries and public utilities are main programme of the party. The party's policy is not based on Marxism—instead it is derived from the ethical idealism of the labour, co-operative and radical movements and the practical rationalism of Fabianism.

Liberal Party—Progressive Party of England, stands for free trade, was known as Whig Party in the 18th and 19th centuries, once a great political force, but now an insignificant party.

Anti-Fascist People's Freedom League, Burma (A.F.P.F.L.)—is the national organisation of the Burmese people started by its president late General Aung San who organised Burmese insurrection against Japan in early 1945.

M. R. P.—The movement Republican Populaire, is the popular central bloc of French politics consisting Catholic peasant, petit bourgeois and workmen of the Christian Trade Unions.

Popular Front Party—Political Party in different countries composed of communists, socialists and other democratic parties against Fascism and Nazism.

Democratic Party—One of the two great political parties in U.S.A. Founded in 1792 by Jafferson to defend the rights of the individual states against the centralising policy of the federalists, it tends to be the party of the "small man" as opposed to the Republicans, the party of the "big business", but the division between the two are not clear cut. Its stronghold is the Southern States.

Republican Party—A great political party of U.S.A. formed in 1854 by the coalition of all opposed to the extension of slavery. The party is largely isolationist and is more right-wing of the two parties of U.S.A. Yet strictly speaking the two American parties cannot be exactly classified under left and right pattern and there are conservatives and as well as progressive republican as there are conservative and progressive democrats. During the period proceeding World War II, the republicans were largely isolationists. But from 1940, they changed their opinion.

POLITICAL TERMS

Absolutism—The system of unlimited government, the governments having no representation, vote or other share in the administration.

Amnesty—An act of Government granting exemption from criminal prosecution and punishment.

Appeasement—A foreign policy of pacification or yielding to the demands of a potential enemy rather than opposing him by force.

Ambassador—High ranking minister representing his government in a foreign country.

Anschluss—German word meaning a "joining." Politically, it refers to the union of Austria with Germany effected on March 12, 1938.

Apartheid—An African word for "separateness." It means complete segregation socially and politically, of white and non-white peoples, and among the non-whites of Bantus, Indians and coloured peoples of half-castes in South Africa where Prime Minister Malan's Group Area Bill legislates for different residential and trading areas for all sections to "make South Africa safe for the white races."

Agent Provocateur—A French term for political agent sent during political or social conflicts into the adversary's ranks to provoke in the guise of an adherent incidents and compromising actions.

Authoritarianism—The political system in which the government is based on what is claimed to be the natural need for a strong and resolute authority to direct the state without reference to the fluctuating opinions of the people, as opposed to the democratic system based on their freely expressed opinions. The term is a milder name for absolutism. Totalitarian systems like Fascism, Nazism and Communism are extreme forms of authoritarian government, although Soviet Union would reject the application of the term to itself.

Anti-Semitism—Opposition to the Jewish race. The movement became conspicuous in Europe during the last quarter of the 19th century. The movement appears to be based on economic rather than religious or political cause. It flared up strongly in Nazi Germany under Hitler.

Armed Neutrality—The position assumed by a neutral when it serves notice on belligerents that it is prepared to protect its neutral rights by force.

Autocracy—means the unlimited rule of an individual.

Absolutism—The system of unlimited government, the governed having no representation, vote or other share in the administration. An absolute ruler governs in accordance with his own will without consulting the people and without being bound by any law. Absolutism is opposite to constitutional government and democracy, and the antithesis to the separation of powers.

Autarky—A term used for the idea of national self-sufficiency. The usual motive of autarky is the striving of domestic producers to monopolise the market, preparation for war and blockade and a general transference of nationalism to economists. Means for fostering autarky include protective tariffs, a ban of imports, subsidies and deliberate planing.

Armistice—Agreement between combantants to cease fighting. It may be either temporary for the purpose of removing the wounded or burying the dead or it may be a preliminary to a general peace.

Anarchism—A political doctrine standing for the abolition of every organised authority and of State machinery. The anarchists hold that every form of government tantamounts to tyranny. They want to do away with all forms of state and government and to substitute for them free associations of individuals or groups without any coercive organisation, without written law, police courts, prisons or armed forces. In such a society men are expected to live together harmoniously on the basis of voluntarily respected mutual contracts.

Ballot—The paper on which are printed the names of candidates for office in elections. The elector indicates his choice by marking a cross in plurality electoral systems.

Bicameral System—That form of government which consists of two separate houses or chambers in which the concurrence of both is necessary to the enactment of legislation. Adopted to act as a check upon hasty or ill-considered legislation.

Bilateral—Two-sided, a term used of agreements concluded between only two parties, as distinct from multilateral agreements which are between several parties.

Balance of Power—This phrase means the preservation of an equality of strength between countries or groups of countries. The idea is that no one country shall become too powerful for the safety of the others.

Blockade—A term used in international law for the prevention of goods entering or leaving an enemy country by land or sea. Neutral States are affected most by a blockade by sea, for if their ships try to approach the ports of blockaded country, they and their cargoes are liable to be confiscated by the blockading force.

Bourgeois—French word for the middle class. They comprise capitalists, manufacturers, merchants, bankers, generally all independent producers, traders and employers, also directors and managers and members of the professions with a corresponding income and social status, in contrast to the *Proletariat*, the working class without any property who lives on selling its labour.

Bloc—means an association of legislative members or of political workers of different parties, formed to support a certain measure or ministry. A French word meaning 'mass' or 'group.'

Bolshevism—accepts the doctrine that an irreconcilable antagonism exists between the propertied class or bourgeois and the property-less workers. It invites as inevitable and necessary class war, the object of which is the destruction of all classes, except the proletariat, in whose interest and by whom future society will be organised and governed on a communistic basis.

Brain Trust—In U.S.A. the nickname for a group of economists and businessmen who were officially advisers to President F. D. Roosevelt during the first year of his presidency and are believed to have greatly influenced his 'New Deal' policy. The term has since been applied to other groups of experts believed to be influencing government.

Buffer State—a small state established or preserved between two greater states to prevent direct clashes between them.

Bureaucracy—government by an elaborate system of administrative departments and officials which generally tends to become unwieldy and laborious in its operation. It produces red tape or oversystematization. Its most frequently charged defects are rigidity, conservatism and spirit of routine.

By-election—Election to a seat rendered vacant during the running term of an elected body due to resignation, death or any other subsequent disqualification.

Capitalism—the economic system founded on free enterprise and private ownership of the means of production and distribution.

Caucus—A meeting or conference of members of a political party or group to determine upon the candidate or policy to be supported in an ensuing election or other political contest.

Civil Disobedience—Refusal to co-operate with government without however using violence.

Coalition—is a combination of political parties having different or opposed interests, effected with the object of carrying through or resisting a particular policy.

Concordat—An agreed pact ; specially between Pope and a government equivalent to international convention.

Contraband—goods or merchandise the importation or exportation of which is forbidden ; in war time applied specially as between neutrals and belligerents.

Communism—Represents revolutionary socialism, hostile to the slow progress or gradual reform and progressive compromise. Communism believes in the dictatorship of the proletariat for a transitional period, after which a free society would come into existence in which every body would contribute to the common weal according to his capacity and receive a reward according to his need—Communism proclaims the equality of all peoples and races and believes in the final establishment of an international order.

Collective Responsibility—in countries with parliamentary government, the joint responsibility of the government to the Parliament. The government is responsible for the political actions of each member of it and each member is responsible for the actions of the government.

Collective Security—All countries should jointly guarantee the security of each other—it is the basic principle of the League of Nations covenant and the United Nations Charter.

Cold War—International tension following World War II between U.S.S.R. and Soviet satellite States on one hand and Western European States, U.S.A. and Canada on the other.

Corporate State—A state organised politically on the basis of vocational corporations instead of territorial units. A corporate parliament does not consists of representatives of territorial constituencies but of delegates of professional corporation who are sent to the parliament according to the quota system.

Coup D'elat—a sudden change of government by force effected by holders of government or military power.

Constituent Assembly—is an assembly convened for the purpose of drawing up a constitution, but it only comes and this is the vital point—after there is a breakdown in the existing machinery of Government and a change has been brought about in the *status quo.*

Condominium—A common rule of two or more nations in a territory such as Anglo-Egyptian Sudan.

Conscientious Objector—Person who refuses to enlist in the military service on moral or religious grounds.

Colony—a company of people, purposely or otherwise transplanted from their mother country and remaining subject to the jurisdiction of the parent State.

Crown Colony—A Br. Empire colony in which the Crown retains some kind of control over legislation.

Customs Union—A union of states or nations for the purpose of establishing orderly trade with one another and a common tariff on imports, exports and goods in transit as now established in Low Countries of Europe.

Democracy—"Government of the people, by the people, and for the people"—*Lincoln.* It is based upon freely elected representative institutions and upon an executive responsible to the people. It is based upon the fundamental assumption of the equality of all individuals and of their equal right to life, liberty (including the liberty of thought and expression) and the pursuit of happiness.

Demarche—Diplomatic term from the French, used for representations whether moderate proposals or severe threats, made by one state to another through diplomatic envoys.

Diarchy—A form of government in which the supreme power of the state is vested in two bodies or persons.

Diehards—extremely orthodox and unbending members of a party, it was specially applied to the members of the Conservative party.

Dictatorship—Control of Government or ruling power by a minority or by an individual. In ancient Rome, the dictator was recognised as a ruler. In modern times, Dictatorship flared up in Europe after the World War I. Mussolini in Italy and Hitler in Germany seized power unconstitutionally but with the support of the people.

Dollar Diplomacy—A nickname for the foreign policy of U.S.A. for the purposes of expanding American financial and commercial interests abroad under the guise of promoting international friendship.

Dominion Status—Dominions "are autonomous communities within the British Empire, equal in status, in no way subordinate one to another in any aspect of their domestic or external affairs, united by a common allegiance to the Crown."

Diplomacy—Art of negotiation specially between countries. Each country possesses a diplomatic service to carry on negotiations with foreign countries. Some diplomats such as ambassadors, ministers, envoys, etc., go abroad and live in a foreign capital to keep in touch with the Government. Their business is to watch over interests of their country and to send regular reports upon all that concerns it.

Electoral College—Any body of electors limited in number, meeting in one place to choose a public official.

Extra-Territoriality—the legal fiction that foreign diplomats and diplomatic agencies are outside their country of residence inspite of physical presence. Embassies etc. form foreign islands, so to speak, within the territory of a state. They are not subject to its laws.

Extradition—Surrender of a fugitive from justice by one country or state to the authorities of another.

Espionage—A French word which expresses more than English word spying ; it implies an organised system.

Federalism—A system of government wherein political powers of the state are constitutionally distributed between National Government and the local Governments or member units which are called 'States,' 'Provinces,' etc. The division of powers between Federal government and separate states is laid down in the constitution and varies between one another.

Fifth Column—Term originated during Spanish War (1936-39) when General Franco's troops in four columns, attacked Republican Madrid from outside, while the General's supporters organised internal uprisings. These internal fighters were styled the 'fifth column.' Since applied to enemy sympathizers in any country, who attacked in rear, whether with arms or by propaganda.

Filibuster—A politician who attempts to delay, or stop, the passing of a bill by endless speech-making and other legitimate practices.

Guerilla—Irregular warfare. Guerilla warfare consists in attacks upon a regular army by bands of irrgular troops, usually the inhabitants of an invaded country.

Genocide—the wholesale destruction of peoples or races and measures conducive to it. In 1948 U.N. proclaimed genocide a crime. An agreement to this effect was adopted by the General Assembly in 1948 which is yet to be ratified.

Gentleman's Agreement—An informal international agreement based on a verbal exchange or correspondence, without a treaty or convention being signed.

Gerrymander—A practice of laying out electoral districts to ensure the majority of votes for party in power.

Hegemony—Leadership ; especially of one state or a group.

Imperialism—Policy of empire-building and conquests transcending national frontiers. It now means for every policy of conquest and colonial expansion.

Internationals—Socialist movement in which socialists from many countries are united. There have been three such movements or Internationals, and each has held several Congresses. *First International*—accepted a programme drawn up by Karl Marx and had lasted from 1866 to 1874. *Second International* in which there was trade union element, was organised in 1889. It sought to compass the aims of Socialism by constitutional, not revolutionary action and it held several congresses between 1882 and 1930. *The Third International* was organised in Moscow and was revolutionary in its aims. It declared in favour of establishing communism by force.

Imperial Preference—In the British Empire, the trading system whereby the members of that Empire give to each other preferential treatment in their tariff regulations and import quotas.

Iron Curtain—A term denoting the Steltin-Trieste line in Europe, the territories to the east of which are directly or indirectly controlled by U.S.S.R. The term was coined by W.S. Churchill when he referred to the fact that Russians had sealed off the lands behind the line so that people in one part of Europe could know little of what was really happening in the other.

Isolationism—The path of keeping aloof from affairs of other countries.

Jitterburgh—Phrase of American origin applied to apprehensive and excitable alarmists.

Joint Responsibility—The guiding principle of the Cabinet system of government. Although every minister is in charge of a particular portfolio, all ministers are jointly responsible to the legislature and a vote of no-confidence against one is a censure on all.

Lebensram—German word for 'living space,' a new word for German imperialism. It was used to stress that population is too dense and to claim such territories as agricultural regions towards Black Sea and colonies overseas.

Left-wing Parties—The progressive parties whose representatives customarily sit on the left-hand side (viewed from the chair) in the parliaments of most countries. The custom dates from the French National Assembly of 1789 in which the progressives sat on the left, moderates in the centre and the conservatives on the right. Now a days, 'left' is more or less synonymous with 'radical' in its general meaning.

Lend-Lease—the system of lending and leasing supplies and installations to each other developed by the allies in the World War II. It was started by President Roosevelt.

Marxism—the Socialist doctrine following the theories of Karl Marx (Germany). His ideas are that all wealth is produced by Labour and should go to labour, and that as this leaves nothing for the capitalist, who can therefore never accept the system, the worker must prepare for class war in which capitalism will be destroyed. An essence of his theories is that history is largely determined by economic forces.

Minority—Any racial, religious, occupational or other group constituting less than a numerical majority of the population whose interests need protection from an overpowering majority controlling the government.

Moratorium—A period during which no business engagements are completed or debts or liabilities enforced. A moratorium is declared by the government in times of a financial crisis.

Most-Favoured Nation Clause—a clause customary in treaties of commerce whereby signatories undertake to extend automatically to the other party any reduction in tariff or other economic favour which they may in future accord to any other country. Thus if a country at a later date grants a tariff reduction in respect of some articles to some other country, this will also apply to all the countries with which it has previously made trade treaties.

Naturalisation—The word is used for the admission of a person of foreign nationality into that of a country he desires to adopt. An oath of allegiance has to be taken.

Navicert—The method of certifying goods which might be imported into neutral countries.

Non-aggression Pact—Treaty between two or more states pledging each not to attack the other and to settle their disputes by negotiation or arbitration.

Non-intervention—Generally the principle of abstination from interference with the internal affairs of other nations. It rests on the recognition of sovereignty as the permanent factor in international relations and is one of the most often involved principles in the policies of the world.

Non-belligerency—This word is used for sympathetic attitude, short of fighting, which a country adopts towards one side in war time. It therefore differs from the strict impartiality called for in neutrality.

Nationalisation—Taking management by the state of trades and industries, etc., with or without compensation; changes from private to state ownership.

Neutrality—In international law, condition of a state abstaining from participating in a war between other states and maintaining an impartial attitude in its dealings with the belligerent states, with the recognition of this impartiality by the warring states.

Open Door Policy—System of keeping trade open to all countries, disregarding monopolies or preferences on equal terms without privileges or discrimination.

Opposition—Freedom to oppose the existing government is fundamental to democracy and the British practice of calling the Opposition "His Majesty's Opposition" on the analogy of "His Majesty's government" is a recognition of the fact that the opposition is as loyal and essential to the state as the government.

Ordinance—That which is ordained by authority. Ordinance is an act promulgated by the chief of the state without passing through the legislature of a country.

Parole—An oath taken by a prisoner of war that, if released, he will not try to escape, nor during a war against his captors.

Point of Order—A question raised by a member of a legislative body as propriety of a motion or proceeding under the rules. The presiding officer is required to rule on it immediately as his ruling is subject to appeal to the floor.

Power Politics—(1) the policy of maintaining and expanding national power for power's sake, (2) the sum total of international relations in a world consisting of sovereign states whose existence depends on power, (3) by a more narrow definition, the use of threats and force for the achievement of political objects in international relations without consideration of right and justice.

Purge—Expulsion, possibly killing of unreliable, unruly, disobedient or merely inconvenient members of a party.

Putsch—German word meaning "attempt to take by force", specially power, control of state.

Prize Court—This is a court of law set up in time of war to decide whether a ship and its cargo captured by the navy is a lawful prize or not. If it is decided that a captured ship is enemy property or a cargo is contraband, they are sold and the proceeds are distributed to all members of the navy at the end of the war.

Privy Purse—In England allowance from civil list for personal use of the Sovereign.

Prohibition—Government action which prohibits by law the manufacture and sale of intoxicating liquors except for medical or sacramental use.

Plural Voting—System allowing a person to cast more than one vote in the same election. The voter is eligible to vote in more than one constituency by virtue of its special position *i.e.*, a city and a university vote by the same person.

Provincial Autonomy—The system (specially in Indian Constitution) under which States enjoy complete autonomy as far as the States subjects are concerned and have concurrent jurisdiction with the centre on subject of common interest.

Proportional Representation—is the method used in an election by which the votes are so counted that each party has representation in the elective body in proportion to its strength, so as to ensure the representation of minorities.

Plebiscite—An expression of the will of the whole people, sought in ratification or disapproval of a particular measure, already decided but regarding which their elected representatives hesitate to act. It comes from the Latin *plebs*, the common people.

Protocol—The rough-draft of a diplomatic document on which diplomatic transactions tentatively commenced.

Privileges, Parliamentary—"the sum of peculiar rights enjoyed by each House collectively as a constituent part of the High Court of Parliament, and by members of each House individually, without which they could not discharge their functions and which exceed those possessed by other bodies or individuals."—*Erskine May.*

Pourparler—An informal preliminary conference of representatives of different groups, functions or countries looking to a formal agreement settling disputed questions between the parties.

Pacifism—Opposition to war or military force in any form. Pacifists believe that all international disputes should be settled by arbitration. The various movements toward world peace are not necessarily wholly pacifistic, as they often advocate defensive war and oppose only aggressive war.

Pogrom—A Russian word for 'devastation', a term for mass raids on Jewish quarters in Tsarist Russia ; killing, looting and arson were practiced. They were later introduced into Germany by Nazis.

Public Utilities—Electric light, gas, telephone, street car and other services of use to all members of the community.

Proletariat—The wage-earning class of a community collectively *i.e.*, propertyless class dependent on sale of labour. In Marxism, the Proletariat is opposed to the bourgeoisie, the employing class and will eventually overthrow it.

Politbureau—Short for political bureau, the leading body of communist parties. The communist party of Soviet Union has a Politbureau which is regarded by many as real government of Russia. Every communist party in whatever country has a Politbureau.

Popular Democracy—Another name for Communist dictatorship. According to communist theory, a half-way house on the road to communism.

Quislings—Local traitors, names after the Norwegian traitor, Major Quisling, who betrayed his country to the German ; specially those who quietly prepared the way for Germany in her neighbouring countries.

Radical—Persons of political views quite different from those held by the majority of persons who, in politics, are in favour of sweeping reforms or other changes in government or laws.

Recall—A procedure for the removal of a public official from his office by a vote of the people, and usually one after he has served at least six months of his office.

'Reds'—Slang term for revolutionaries, specially communists, derived from Red Flag, the traditional symbol of revolt.

Republic—State in which the sovereign power resides in the electorate, which is the body of the people having a voice in electing representatives to rule them. There is no hereditary sovereign to rule.

Residuary Powers—In Federal Constitution where the powers are divided between the federal centre and the federating States or units under a system of three lists—federal, state or provincial and concurrent. Powers relating to new spheres of administration not covered by either of the three lists are known as residuary powers.

Racketeer—One who levies blackmail on industry by threats of interference.

Ratification—The confirmation of an international treaty concluded by a government by the head of the State concerned. As a rule, all international agreements require ratification and do not become valid before it. In most countries, constitutional law or convention requires that the treaty be approved by the Parliament before it is ratified by the head of the State.

Reprisal—A retaliatory punishment inflicted by one country upon another for an alleged illegal act.

Right and Left—In the legislative bodies, it is the fixed habit of the conservative groups and parties to seat themselves on the right hand side of the Speaker or President and of the liberal or radical element to seat themselves on the left. The term 'centre' is used for middle parties or groups.

Regent—One who rules on behalf of a sovereign, when a sovereign is a minor, or is insane, or in any other way incapable of ruling, it is usual to point a regent to act for him.

Referendum—Bringing a proposed law before the people as a whole for decision.

Reciprocity—Exchange of commercial privilege. It is usually experienced when two nations make tariff concessions to each other.

Sanctions—Coercive measures taken to ensure fulfilment of international treaty obligations. Sanctions were provided in the covenant of the League of Nations against countries resorting to war in defiance of the Covenant. U. N. Charter also provides for sanctions though it does not use the word 'sanctions'.

Secret Session—For the discussion of important questions, Parliament sometimes sits in secret when all withdraws from the house except the members.

Sphere of Influence—A region normally undeveloped, politically under the determinative power of a foreign nation.

Soviet—Council; a local governing body in the U.S.S.R. composed of peasants, soldiers and workers which send deputies to the higher congress.

Staw vote—Unofficial polling of public opinion.

Suzerainty—A State that exercises political control over another state in relation to which he is sovereign.

Syndicalism—A socialist movement aiming at trade union socialism instead of State Socialism.

Scorched Earth—a wartime policy of destroying all resources when defending forces had to withdraw before the invader.

Sabotage—At first this word was confined in its meaning to malicious waste or destruction of an employer's property by workmen, as a means of enforcing demands in labour disputes. Now it is being applied more broadly, to define any malicious crippling or destruction of property especially as practiced by foreign secret agents or sympathisers for the purpose of damaging military equipment.

Self-determination—The principle that every distinct people or nation ought to have the right to determine the question of its independence, its form of government and its political destiny.

Tammany Hall—A name given to the Democratic Party's organisation in New York city, which sprang from Trammany society of 1805. One of the famous political machines of American history—very influential in New York city and State politics, also in the Democratic party on a national scale.

Third Force—A term originating in the post-World War II; France, where it was applied to the Socialists and M.R.P. intermediate between the communists and the right-wing supporters of De Gaulle. It has been applied elsewhere to policies intermediate between Communism and Fascism and other right-wing forces. It is applied also to a group of States—W. Europe which would be sufficiently strong and influential to reconcile the U.S.A. and U.S.S.R. by co-operating with both.

Totalitarian—a believer in the complete centralization of government control under the political group and suppression of other parties.

Total War—denotes the present form of war in which the distinction between combatants and non-combatants are fast disappearing.

Theocracy—A state governed by God or priests.

Trotskyism—The views of Trotsky on socialism, revolution and the development of Soviet Union and the movement propagating these ideas. After the overthrow of Trotsky in 1925-7, a number of communists supporting his opposition to Stalin formed revolutionary communist parties which in 1936 established Fourth International which held conferences in Paris in 1936 and 1948. They are left-wing communists, more radical and revolutionary than Stalinist, the official communist with whom they are in conflict. These Trotskites have appeared in various countries as 'Revolutionary Communist Party' 'Revolutionary Socialist Party' etc.

Trusteeship—Administration by a member of the United Nations of an area not yet ready for self-government.

Unilateral action—Action taken by one party to an agreement without consulting the other parties in international affairs.

Ultimatum—Final statement of demands, rejection of which is assumed to lead at once to breaking-off friendly relations and to war.

Underground—organised, secret opposition to the government or force in power.

V. E. Day—Victory in Europe. May 8th 1945, the day of the official end of the European phase of the World War II.

V. J. Day—Victory in Japan, August 14, 1945; the day making the end of the war in Japan.

Warmonger—people who desire war and support war-like policy.

Whigs—Old name for English liberals, no longer in use. It was the description of liberal party in English Parliament after 1680.

Veto—The term is most used to-day with reference to the United Nations but its history dates from Roman times. '*Veto*" is Latin for "I forbid it"; it was the word used by the Roman magistrate when invoking the law against some action. In many modern States the King or President has the power of vetoing measures passed by the legislature. In the United Nations, only the five permanent members out of the eleven members of the Security Council have the power of veto, which prevents a decition being taken even if every other member is in favour of it. The United Kingdom, the United States and China have never yet exercised the veto; the U.S.S.R. has done so repeatedly, and France twice.

Wishful Thinking—signifies optimism not always founded on reality.

Whip—A member of a political party assigned to the task of rounding up members of that party to ensure their votes and to hold them in line with the party policy.

Writ—A document directed to some public officer or private person commanding him to do a certain act therein specified.

PLANS, POLICIES, TREATIES, ALLIANCES, COUNCILS, CHARTERS, CONFERENCES, ETC.

Atlantic Charter—A joint declaration was made by Roosevelt-Churchill on August 14, 1941, stating (1) no aggrandisement, territorial or other, (2) No territorial changes without expressed wish of the people concerned. (3) Right of all people to choose the form of their own government. (4) Restoration of sovereign rights and self-government to those who have been forcibly deprived of them. (5) Access on equal terms to trade and to raw materials of the world. (6) Fullest collaboration between all nations in economic field. (7) Final peace of the whole world after destruction of Nazi tyranny.

Arab League—The formation of Arab League in 1945 was largely the outcome of the movement which sought to recreate and reintegrate the Arab community as a separate national group held together by the memories of common past, common religion and a common language. The object of the League is to strengthen the ties between the parties, to coordinate their political programmes, to preserve their independence and sovereignty and to consider in general the affairs and interests of Arab countries. Arab States formed a union by a pact signed in Cairo (March 22, 1945). The League consists of Egypt, Iraq, Jordan, Saudi-Arabia, Syria, Lebanon and Yemen. Provision was made for admission of Palestine conditional upon her achievement of independence.

Arab Security Pact—This is known as Arab League Collective Security and Economic Co-operation Pact concluded on July 17, 1950. The pact has been ratified by Egypt, Iraq, Syria, Jordan and Lebanon. This treaty links the signatory States into military, political and economic alliance pledging resistance to armed attack and reaffirming their obligations under Arab League and U.N. charters.

Asian Relation Conference—An unofficial and non-political conference of Asian countries held at New Delhi in 1947 with the object of discussing economic, social and cultural problems common to all Asian countries, controversial political issues being excluded from its agenda. The main subjects of discussion were (1) National movements for freedom in Asia, (2) Racial problem and conflicts, (3) Inter-Asian migration, (4) Agricultural and Industrial development, (5) Labour problems and social services, (6) Status of women, etc. The formation of a permanent Asian Relations Organisation was also announced in 1949 with headquarters at New Delhi.

Benelux—This is the combination of three countries—Belgium, Luxemburg and the Netherlands which have established a complete Custom Union among themselves. No longer are there any tariff barriers between these three countries. All three are now together called Benelux. The Benelux has been an influential example of closer economic co-operation for recovery of Europe.

Brussels Pact—The pact was signed in March 1948 by Britain, France and the Benelux countries. It is a military defence pact and also equally an economic co-operation pact. It pledges all five countries to cease from bilateral injury to one another and to enlarge their commercial exhanges.

It was designed "to fortify and preserve the principles of democracy, personal freedom and political liberty, the rule of law and constitutional traditions."

Colombo Plan—This plan began from July 1, 1951. It was a six-year plan of economic aid to South and South-East Asia agreed on at the British-sponsored Conference at Colombo in January 1950 by Great Britian, Australia, Canada, Ceylon, India, New Zealand, Pakistan. Later Malaya, Singapore, North Borneo, Sarawak promised co-operation. Burma and Indonesia sent observers to meetings of Consultive Committee in London. The Project will raise £1,868 million, help by governments, rest by bank loans, contributions etc., to support mills, power plants, railways, irrigation, other capital goods, thus combating poverty and communism. United States is not a participant, but will consult on Point Four funds in Asia. The International Bank of Reconstruction and Development will co-operate. Britain will contribute £300,000,000, Canada and Australia each voted £25,000,000 for the first year.

Cominform—At a secret meeting on Sept. 21-28, 1947, representatives of the communist parties of nine European nations re-established Communist International (Cominform) which was officially dissolved in Moscow on May 22, 1943. The formation of the fourth International, officially called Information Bureau with headquarters in Belgrade, Yugoslavia was announced in Moscow on October 5, 1947. Communist parties of following nations were represented—U.S.S.R., Yugoslavia, Poland, Hungary, Bulgaria, Rumania, Czechoslovakia, France and Italy.

The manifesto stated that it was essential for the anti-Imperialist democratic camps to carry out a co-ordinated programme of action and evolve their own tactics against American imperialism, against its British and French allies and against the right wing socialists particularly in Britain and France.

Council of Europe—was constituted in 1949 to secure greater measure of unity between the European countries. The nations participating in the Council are Belgium, Denmark, France, Ireland, Germany, Luxemburg, Greece and Turkey, Italy, Netherlands, Norway, Sweden and United Kingdom. The Council consists of two chambers—the lower one consists of the ten foreign ministers and upper one called Consultive Assembly and consisting of 87 delegates. The frame-work of organisation is embodied in a statute agreed between the ten Foreign Ministers of the founder-governments. The Statute defines the Council's aim "as achieving greater unity in order to preserve their common heritage and promote their social and economic progress." The defence and economic matters are not to be discussed.

Declaration of Human Rights—was passed by the General Assembly of U.N. on Dec. 10, 1948. The declaration was designed as a statement of what men and women are entitled to expect in a civilized world. The Declaration of Human Rights proclaimed the inherent rights of the individual as against the power of any totalitarian state. "No one shall be subjected to arbitrary arrest......to arbitrary interference with his privacy, family, home....No one shall be forbidden to leave any country, including his own....Every one has the right to freedom of opinion and expression. The will of the people shall be the basis of the authority of Governments ; this shall be expressed in periodic and genuine elections. Every one has the right to work....to protection against unemployment.... to join trade unions. Every one has the right to a standard of living adequate for health and well-being of his family....Every one has the right to education."

Dumbarton Oaks Conference—A meeting of the representatives of U.S.A., Great Britain, Russia and China held at estate known as Dumbarton Oaks in Washington, recommending on Oct. 9, 1944 the creation of the United Nations, an international security organisation.

Freedom of News Convention—was adopted by U.N. on May 14, 1949. The purpose is to protect the freedom of correspondents and news agencies operating in the various countries. They are to have free access to the sources of information and the right to transmit news freely. There is to be no peacetime censorship of news except for reason of "national defence."

Genocide Convention—was adopted by U.N. on Dec. 9, 1948. The word genocide was coined by Prof. R. Lamkin of Poland to mean the deliberate extermination of any human group on racial, religious or linguistic grounds. The convention binds its signatories to prevent and punish the crime of genocide.

Four Freedoms—President Roosevelt in his address to the Congress of Jan. 6, 1941 defined four essential human freedoms—(1) Freedom of speech and expression, (2) Freedom of every person to worship God in his own way, (3) Freedom from want (4) Freedom from fear.

International Red Cross—Two international organisations are known respectively as International Committee of the Red Cross and the League of Red Cross Societies, both with headquarters in Geneva, Switzerland. The first of these is a wholly international agency unconnected with any national society which attempts to maintain the basic Red Cross principle of the Geneva convention ; the second agency is a federation of autonomous national Red Cross Societies designed to further co-operation among them.

Japanese Peace Treaty—was signed at San Francisco on Sept. 8, 1951 by 49 nations. The State of War between Japan and the Allies was terminated. Japan's full sovereignty was recognised as is its right to apply for U.N. membership. Japan recognised the independence of Korea, renounced all rights to Formosa, Pescadores, Kuriles, Sakhalin, the Pacific islands formerly under mandate to Japan, the Antarctic area, Spartly Island and the Paracels ; Japan agrees to U.N. Trusteeship over Kyukyu and Daito Islands, the Bonius, Rosario Island, the Volcano Islands, Parece Vela and Marcus Island.

League of Nations—An organisation of many nations formed in January, 1920 for the promotion of international peace and co-operation ; dissolved in April, 1946.

Marshall Plan—also known as Organisation for European Economic Co-operation ; on June 5, 1947, the U.S. Secretary of State, Marshall made a speech in the Harvard University in which he outlined the seriousness of the shortage of dollars for the economic situation of Europe and suggested American assistance in the economic recovery on the understanding that the European countries reached some agreement about their requirements and the part they themselves would take in giving proper effect to the action of U.S. A conference of sixteen nations of Europe willing to work the Marshall Plan began in Paris on July 12, 1947 and formulated an economic recovery programme which aimed at restoring European economy by the end of 1950 by (*a*) a strong production programme by each participant, (*b*) creation and maintenance of internal financial stability, (*c*) maximum mutual help between the participating countries and (*d*) a solution of the problem of the European trading deficit with the American countries. The report calculated the deficit for the 16 countries and their dependent territories at $22,440 million over 4 year period.

Munich Agreement—Signed by Germany, Great Britain, France and Italy on September 29, 1938 at Munich. It provided for the cession to Germany of the Sudetan-German districts of Czechoslovakia ; the new frontiers were guaranteed by all the signatories. The agreement was violated in March, 1939 by Hitler seizing what was left of the country.

Philadelphia Charter—was adopted by the International Labour Organisation at the Philadelphia Conference on May 10, 1944. It declares : that labour is not a commodity ; that freedom of expression and of association are essential to sustained progress ; that poverty anywhere constitutes a danger to prosperity everywhere ; and that war against want requires to be carried out with unrelenting vigour within each nation.

North Atlantic Treaty—was signed on April 4, 1949 by Belgium, Canada. Denmark, France, Iceland, Italy, Luxemburg, the Netherlands, Norway, Portugal, United Kingdom and U.S.A. at Washington. The treaty stated among others that the parties were determined to safeguard the freedom, common heritage and civilization of their peoples, founded on the principles of democracy, individual liberty and the rule of law. Parties undertook to settle any international dispute by peaceful means. The parties will consult together whenever the territorial integrity, political independence or security of any party is threatened. The parties agreed that an armed attack against one or more of them in Europe or North America should be considered an attack against them all, and consequently they agree to assist the party or parties so attacked by taking forthwith individually and in concert such action as it deemed necessary, including the use of armed force to restore and maintain the security of the North Atlantic area.

Pan-American Union—An international body created by the 21 American republics for the fostering of mutual understanding and co-operation, with essential duty of making effective the resolutions adopted by the successive Pan-American Conferences. A general Conference of the member Republics is held quinquennially known as *Pan-American Conference.* The Union is financed by its 21 members on the basis of population.

Truman's Four Point Programme—In this inaugural address, Jan. 20, 1949, President Truman outlined a four-point U.S. policy for helping to maintain world peace and freedom. *Point* 1—continued unfaltering support of the United Nations. *Point 2*—continuation of American programme of world economic recovery. *Point 3* —strengthening of freedom-loving nations against agression through collective defence.

Socialist International—International Socialist Conference was held at Frankfort, Germany in June 1951. It adopted the title Socialist International. It rejected Russian Marxism and declared: 'Since the Bolshevik revolution in Russia international communism has split the Labour movement and built up a rigid theology incompatible with the critical spirit of marxism. It declared also "Socialist planning does not pre-suppose public ownership of all means of production" but added "workers must be associated democratically with the direction of their industry,"

Truman Doctrine—A name given to the policy announced by President Truman in 1947 in respect of Turkey and Greece. The President stated that the protection of these countries against totalitarian encroachment, meaning Soviet aspirations, was of vital interest to U.S.A. Financial and technical aid was extended to these countries by the United States.

Torquay Tariff Agreements—Reciprocal tariff concessions, negotiated at Torquay, England, were opened to nations signing Torquay Protocol of the General Agreement on Tariffs and Trade (GATT), to which 30 nations had subscribed at Geneva. Torquay agreements with 17 countries were announced by the United States May 8, 1951. These reduced rates on metals in short supply and on specific foods : in turn foreign nations lowered tariffs on U.S. manufactured goods and farm products. The agreements affected 1325 tariff items.

Tripartite Security Treaty—This is between U.S.A. Australia and New Zealand, signed on Sept. 1, 1951 (1) to settle by peaceful means any international disputes (2) parties will consult together wherever the territorial integrety, political independence or security of any party is threatened in the Pacific.

Versailles, Treaty of—the peace treaty ending the war of 1914-18 concluded between the Allies and Associated Powers and Germany on June 29, 1919. It imposed terms on Germany in regard to the occupation of Rhineland territory for a period of years, the surrender of Alsace-Lorraine to France and parts of East Prussia to Poland, the handing over to the Allies of Germany's colonial possessions. An important feature of those treaty was the establishment of League of Nations.

Western Union—Organisation of Economic European Co-operation was formed by the sixteen European countries receiving Marshall aid. They declared that the maximum possible effect of increased production will be obtained only if individual country is willing to take into account the economic needs of the group as a whole when planning for production. The sixteen countries are working out plans for industry, agriculture fuel and power, trade and production for next four years. It is pledged by its constitution to draw all 16 countries together in joint programmes for the exchange of commodities and sevices. It is pledged to inspire them towards joint action for "relaxing restrictions on trade."

CONSTITUTION OF INDIA

Preamble—The Preamble of the Indian Constitution resolves to establish a "*Sovereign Democratic Republic.*" This sovereignty is vested in the people of the country. Constitution of India was enacted on 26th November, 1949 and inaugurated on 26th January, 1950. It is a written constitution comprising 397 Articles and nine Schedules. In form the Constitution is federal with a Union Government at the centre and number of States Governments.

The aim of the Constitution is to secure for all its citizens—

Justice, social, economic and political ;

Liberty of thought, expression, belief, faith and worship ;

Equality of status and of opportunity ; and to promote among them all ;

Fraternity assuring the dignity of the individual and the unity of the Nation.

Territory and Extent—There are in India ten States, each with a governor as its head such as Assam, West Bengal, Bihar, Bombay, Madhya Pradesh, Madras, Orissa, Punjab, Uttar Pradesh and Andhra —These are known Part A States.

There are other former Indian States and Union of such States. These are known as Part B States.

Third group of administrative units, known as Part C States eleven in number comprising small states and sub-provinces, otherwise known as Chief Commissioner's States.

The Andaman and Nicobar Islands are a Territory.

Citizenship—The Indian citizens are as follows—(1) Those born or domiciled in India (2) Refugees who have migrated to India from Pakistan and (3) Indians overseas.

The first category includes following persons (*a*) resident of India who has his domicile in the territory of India, who or one of whose parents were born in this country or who has been ordinarily living in it for a period of five years from the day preceding the commencement of this Constitution.

Second category consists of those who have migrated to India from Pakistan or who have come to India from Pakistan under permanent permits granted to them by the Indian authorities.

In the third category falls persons of Indian origin residing outside India. If they meant to retain their Indian citizenship, all they need to do is to apply for it.

In regard to citizenship, the Constitution deliberately adopts the principle of single citizenship for the whole of India. It means that no person is entitled to claim that he is a citizen of two countries.

Fundamental Rights—The Constitution of India makes a declaration of some fundamental rights which it guarantees against violation by the State.

The Constitution contains rights which are declared fundamental and justiciable. These fundamental rights have been classified under the following heads :

1. Right to equality.
2. Right of freedom.
3. Right against exploitation.
4. Right to freedom of religion.
5. Cultural and educational rights.
6. Right to property.
7. Right to constitutional remedies.

Right to Equality—Discrimination against any citizen on grounds of religion, race, caste, sex or place of birth is prohibited. In public employment, Constitution assures equality of opportunity for all. It has established social equality by abolition of title, local and foreign.

Right to Constitutional Remedies—The Constitution guarantees the right to every citizen to move the Supreme Court for enforcement of all fundamental rights. And for that purpose the Supreme Court is given general powers to safeguard these rights as well as the power to propose particular remedies, such as *habeas corpus*, *mandamus* etc.

Rights to Freedom—guarantees (*a*) Freedom of speech and expression, (*b*) to assemble peacefully and without arms, (*c*) to form associations or unions, (*d*) to move freely throughout India, (*e*) to reside and settle in any part of India, (*f*) to acquire, hold and dispose of properties, (*g*) to practice any profession, trade or business.

Religious Freedom—Subject only to public order, morality, health and some other essential provisions, all persons are equally entitled to freedom of conscience and the right to profess, practice and propagate religion freely.

Cultural and Educational Rights—The Constitution provides for the protection of the interests of linguistic, cultural and religious minorities and their right to establish and administer their own educational institutions.

Rights against exploitation—Traffic in human beings is declared punishable offence. So too is *begar* (forced labour except without payment) or any form of forced labour except compulsory service for the State for public purpose.

Rights to Property—No person shall be unlawfully deprived of his property, movable or immovable.

Directive Principles—Though not enforceable through courts of law, are regarded as "fundamental in the governance of the country." These lay down that the State will strive to "promote the welfare of the people by securing and protecting as effectively as it may, a social order in which justice, social, economic and political, shall pervade all the institutions of the national life." Following are some of the principles which the State should secure—

1. Right to an adequate means of livelihood.
2. Fair distribution of wealth.
3. Equal pay for equal work.
4. Prevention of exploitation of child and adult labour.
5. Right to work, to education and public assistance in certain cases.
6. Right to receive free and compulsory education within a period of ten years from the commencement of the Constitution for all children upto the age of fourteen.
7. Public assistance in case of unemployment, old age, sickness, disability, and other cases of deserved want.
8. The right to a living wage.
9. Conditions of work assuring a decent standard of life and full enjoyment of leisure and social and cultural opportunities.
10. Raising the level of nutrition and the standard of living of its people and the improvement of public health.
11. Promoting with special care the educational and economic interests of the scheduled castes and the scheduled tribes and other less favoured sections of the community and protecting them from social injustice and any forms of exploitation.

Union Executive—*President*—The Executive at the centre consists of the President and a Council of Ministers. The President is the executive head of the Indian Republic. All the executive power of the Union including the Supreme command of the Defence Forces is formally vested in the President and all executive actions are taken in his name. He is elected indirectly by an electoral college consisting of the elected members of both Houses of Parliament and Legislatures of the States, by the system of proportional representatives by single transferable vote.

The qualification of the office of the President (1) he should be a citizen of India (2) must have completed the age of 35 years ; and (3) qualified for election as a member of the House of the People. He will not be eligible for election if he holds a job in Government, giving him financial rewards.

Term of office—The President holds office for five years and is eligible for re-election.

Salary and Allownace—The President draws a salary of Rs. 10,000 and usual allowance.

Impeachment—The president may be removed from office by impeachment for any violation of the constitution.

Vice-President—is the ex-officio Chairman of the Council of State. Any citizen of India aged thirty-five years and above and qualified for the membership of the Council of States can be elected to this office by both the Houses Parliament at a joint sitting on the basis of proportional representation by single transferable vote. His term of office is five years. When the President is ill, if he resigns or dies or is removed or is for any reason absent, his place will be taken by the Vice-President, till a new President is elected.

Council of Ministers—The Constitution provides that the President should have a *Council of Ministers* to assist him. This Council of Ministers is the real executive of the Indian Republic with President as its leader. This Council will "aid and advise" him in the exercise of his functions. The President appoints the Prime Minister and other members of the cabinet on the advise of the Prime Minister. The Council of Ministers holds office during the pleasure of the President.

Parliament—The Legislature of the Indian Union consists of the President and two Houses—(1) *House of the People* (2) *Council of States.*

The House of the People will consist of not more than 500 members. These members are directly elected by the voters in the several states. Every adult or grown-up citizen of India is given the right to vote. There is one member for every 750,000 of the population and not more than one member for every 500,000 of the population. The normal life of the House is five years. The minimum age for membership is 25 years for the Lower House. The House of the People will elect a Speaker and a Deputy Speaker from amongst its members.

Council of States is a permanent body elected indirectly and has a maximum strength of 250 members but as nearly as possible one-third of the members shall retire every second year. Among these, 12 will be nominated by the President. The nominated members should be men of learning and wide experience such as artists, writers, scientists and social workers. A member of the Council of States must be a citizen of India and must not be less than 30 years of age. The Vice-President of India shall be ex-officio Chairman of the Council of States.

The Difference between House of the People and the Council of States is as follows—The difference is not merely in their size. The powers given to them are not the same. The function of both is to legislate but the greater part of this responsibility will be borne by the Lower House. A bill has to be passed by both the Houses before it becomes law. In case of a disagreement between the two Houses, a joint session of the two Houses is summoned to resolve the deadlock. The opinion of the Lower House will ultimately prevail owing to its numerical majority. But it is to be noted here that the procedure regarding dead-lock relates only to Bills other than money Bills, for, as regards *money bills* the provision of the constitution is that sole power shall belong to the Lower House. Money Bills cannot be introduced in the Council of States. They must as a rule, originate in the House of the People.

There is freedom of speech in Parliament, subject to certain provisions of the Constitution and rules and standing orders of the Parliament. No member of the Parliament shall be liable to any proceedings of the House. For a period of 15 years from 26th January, 1950, the business of the Parliament can be transacted either in English or Hindi, but after the end of 15 years, the business shall have to be conducted in Hindi alone.

UNION JUDICIARY—**Supreme Court of India.** The Supreme Court of India consists of Chief Justice and not more than seven other judges appointed by the President. Judges hold office until he attains the age of 65 years.

The Supreme Court decides dispute between the Government of India and any State or States or between two or more States involving any question of law or fact. Civil and Criminal appeals of a certain kind from High Courts will also be heard by it. The Supreme Court is also competent to order the enforcement of Fundamental Rights. It has also Advisory Jurisdiction by which the President can refer to it any question of public importance. The law declared by it is binding on all courts of the country.

High Courts in the States—There shall be a High Court for each State. It shall consist of a Chief Justice and such other Judges as the President from time to time think fit. Every High Court has superintendence over all courts subordinate to it throughout the territory under the court excepting any court constituted for Armed Forces of India.

Subordinate Courts—Appointments, promotions and posting of District Judges shall be made by the Governor of the State in consultation with High Court of the State.

PUBLIC SERVICES—The Constitution provides for a Public Service Commission for the Union and one for each State; and it permits two or more States to have a joint public service commission. The main functions of the Union or State Public Service Commissions are to recommend candidates for appointment and to conduct examinations for recruitment to the Central and State Services.

STATE GOVERNMENTS—The States of the Union are divided into three classes, such as Parts A, B, and C. The Part A States are—Assam, Andhra, Bihar, Bombay, Madhya Pradesh, Madras, Punjab, Uttar Pradesh, West Bengal. The Part B States which are either the former Princely States or groups of such States and in respect of which former ruling princes act as governors with the title of Rajpramukh, are—Hyderabad, Jammu & Kashmir, Madhya Bharat, Mysore, Patiala and East Punjab States Union, Rajasthan, Saurashtra, Travancore-Cochin. The Part C States which are the former centrally administered territories known as Chief Commissioner's Provinces and groupings of former princely states are—Ajmer, Bhopal, Bilaspur, Coorg, Delhi, Vindhya Pradesh, Himachal Pradesh, Kutch, Manipur, Tripura. The Government of Part B States are subject to the general control of the President for ten years from the commencement of the constitution. Part C States do not, as do Parts A & B States, enjoy executive powers of legislation in respect of certain specified subjects and they are administered by the President acting through a Lt. Governor or a Chief Commissioner. The Lt. Governor of Vindhya Pradesh and Himachal

Pradesh and the Chief Commissioners of other part C states except Bilaspur, Kutch, Manipur and Tripura act on the advice of ministers by the President through a Chief Commissioner.

The Andaman and Nicobar Islands are administered by the President through a Chief Commissioner and form the only Part D State.

Part A States—There will be a *Governor* for each State in whom all executive powers are vested. He is appointed by the President and holds office during his pleasure. Any citizen of India who has completed 35 years of age is eligible for the appointment as Governor. Governor holds office for a term of five years unless he resigns earlier. Besides official residence the Governor draws a salary of Rs. 5,000 per month and other allowances and privileges.

The Governor will be assisted by a *Council of Ministers* with Chief Minister at the head of the Council to aid and advise the Governor. The Chief Minister is appointed by the Governor and the other Ministers are also appointed by him on the advice of the Chief Minister. Ministers hold office during the pleasure of the Governors. The Council of Ministers is collectively responsible to the Legislative Assembly of the State.

Every State has a *legislature.* Some States have two chambers, while others have only one chamber. Where there are two chambers, one is known as Legislative Council and other as Legislative Assembly and where there is only one House, it is known as Legislative Assembly. Those with two Houses are Bombay, Bihar, Madras, Punjab, Uttar Pradesh and West Bengal. In all the States, the Lower House is called Legislative Assembly and the Upper House is known as Legislative Council.

Legislative Assembly of each State shall be elected by direct election on the basis of adult franchise. The total of the Assembly members shall in no case be more than 500 or less than 60. The actual strength is to be determined on the ratio of one to every 75,000 of the population of the State. Its normal life is five years. Some seats may be reserved for Scheduled Tribes and Scheduled Castes. The Governor may also nominate the representative of Anglo-Indian community.

The total number of members of the *Legislative Council* of a State is not to exceed one-fourth of the total members in the Legislative Assembly, but in no case less than 40. This is a permanent body ; one-third of its members will retire every second year. Half of its members will be elected from local bodies, from among the graduates of three years standing and teachers who have worked at least three years. A third of the members will be elected by the Legislative Assembly from among non-members and the rest will be nominated by the Governor from among men of eminence in literature, art, science or social service.

Part B States—Rulers of Part B States are known as *Rajpramukhs.* They are appointed in accordance with the agreements made between the States Unions and Government of India. The head of Jammu and Kashmir is the only exception. The executive power of the States is vested in Rajpramukhs. There is a Council of Ministers to aid and advise him.

Part C States—These States are administered by the President through a Chief Commissioner or Lt. Governor appointed by him. The Parliament may create a Council of Advisers or Ministers for these States.

Under the *Government of Part C States Act* passed by the Parliament in 1951, Ajmer, Bhopal, Coorg, Delhi, Himachal Pradesh and Vindya Pradesh have been provided with *Legislative Assemblies and Council of Ministers*, while Tripura, Manipur and Kutch will have *Councils of Advisers.*

Part D Territory—The position in Part D Territory is similar to Part C States, save there is no provision for the creation of a Council of Ministers or Legislature. President exercises executive authority through a Chief Commissioner.

Relation between Union and the States—Parliament can legislate for the whole or any part of the territory of India and the Legislature of a State for whole or any part of the State. No law, however, made by the Parliament can be considered invalid on the ground of extra-territorial jurisdiction. For the purposes of distributing legislative powers between the Centre and the States, three comprehensive lists have been drawn up. These lists are (1) *Union List*, (2) *Concurrent List*, (3) *State List.*

The Parliament has "executive power" to make laws in regard to the matters mentioned in the first list *i.e., Union List*. The *Concurrent List* means that matters shared between Union and the States, such as criminal law, civil procedure, preventive detention, marriage and divorce, transfer of property other than agricultural lands, contracts, bankruptcy, etc.

There are 66 items in the "*State List*." Some of them are police, administration of justice, prisons, local government, public health and sanitation, forests, fisheries, etc. The legislature of a State has "exclusive powers" to make laws in matters mentioned in this list.

Jurisdiction over all other matters not mentioned in the Concurent and State Lists will belong to the Parliament. This means that the Union will acquire *residuary powers.*

As regards *Administrative Relations*, the executive power of every State shall be so exercised as to ensure compliance with the laws made by the Parliament and any existing laws which apply in that State, and the executive power of the Union shall extened to the giving of such direction to the State as may appear to be necessary for that purpose.

Union executive is empowered to give directions to a State regarding construction and maintenance of the means of communication declared to be national or military importance. Parliament can declare certain highways or waterways to be national highways or waterways. Union executive can also construct and maintain means of communication required in connection with naval, military and air force works. The President may with the consent of the Government of the State entrust to that Government functions in relation to any matter to which the executive power of the Union exists.

There is provision for the formation of an *Inter-State Council* to investigate and discuss subjects in which States have common interest and inquire into and advise upon disputes which may have arisen between the States.

There are also *Emergency provisions* in case of grave crisis created by war or internal disturbances in which President can give direction to the constituent States as to how their authority to be exercised. President can suspend from operation several articles of the Constitution. During such period, Union Parliament has power to legislate with respect of any of the matters enumerated in the State List.

Election Commission—The superintendence, direction and control of elections to Parliament and Legislature of every State and of President and Vice-President including appointment of election tribunals shall be vested in a Commission known as *Election Commission* to be appointed by the President.

There shall be only one general electoral role for every territorial constituency and no person will be ineligible for inclusion in such role on grounds only of religion, race, caste, sex or any of them.

There is no property qualifications of the voters. Every person who is a citizen of India and who is not less than twenty one years of age and who is not otherwise disqualified is entitled to vote at the elections of the House of the People and the Legislative Assemblies of States.

Special provisions for certain classes—Seats shall be reserved in the House of the People for (*a*) Scheduled Castes, (*b*) Scheduled Tribes.

If Anglo-Indian community is not adequately represented in the House of People, President may nominate not more than two members of that community.

Seats shall be reserved for Scheduled Castes and Scheduled Tribes in the Legislative Assemblies of the States. Anglo-Indians are to be nominated b the Governor or Rajpramukh of a State, if not adequately represented.

The reservation of seats and special representation shall cease after ten years from the commencement of this Constitution.

Financial and the other powers—There is a provision in the Constitution for setting up of a *Finance Commission* to make recommendations to the President as to the distribution between the Centre and the Units of the net proceeds of certain taxes and the allocation between the States of the respective share of such proceeds.

The Central and State Governments are required to set up respectively the *Consolidated Fund of India* and the *Consolidated Fund of the States*. All revenues received by the Government of India and the Government of a State are to be credited into their respective consolidated funds. No money is to be appropriated from the consolidated Fund of India or of a State except in accordance with an Appropriation Act passed by Parliament or the Legislature of the State concerned. Provision has also been made for the establishment of a *Contingency Fund* of India and a Contingency Fund for each State to meet unforeseen expenditure pending proper authorisation by the appropriate legislature. As for auditing the funds, the constitution provides for the apointment of a *Comptroller and Auditor General of India* by the President to keep watch on the finances and accounts of the Union.

Trade and Commerce—The Constitution provides the broad principles of freedom of trade, commerce and intercourse throughout the territory of India. Union Parliament and the State Legislatures are, however, authorised to prescribe limitations when there is scarcity of any particular commodity or any other consideration of national or public interest. But no Legislature, whether Parliament or a State Legislature has power to make a law giving any preference to one state over another or discriminating between different States in respect of items relating to trade and commerce in the lists of the 7th Schedule. Only certain Part B. States are exempted from this provisions for a period of ten years.

Official Language—Hindi in Devnagri script shall be the official language of the Union and the form of numerals for official use shall be the international form of Indian numerals. The English language shall continue for all official purposes of the Union for a period of 15 years, but the President may authorise, during the said period, the use of Hindi in addition to English language. If at the end of 15 years, it is found that Hindi will not be able to replace English wholly, Parliament may provide for the use of English for such purposes as may be specified by law.

The Constitution recognises the use of Assemese, Bengali, Gujerati, Hindi, Karnataka, Kashmiri, Malayalam, Marathi, Oriya, Punjabi, Sanskrit, Tamil, Telegu and Urdu, any one or more of which may be used as the regional languages of the Union.

Amendment of the Constitution—The Constitution shall stand amended when the President gives assent to any bill for the purpose after it is passed in each House of Parliament by a majority of not less than two thirds of the members of the House present and voting. Exception is however made in the case of amendments of certain particular provisions, in which cases any amendment will in addition require the ratification by not less than one-half of the States in Part A and Part B of the First Schedule before such bill is presented to the President for assent.

OUR NATIONAL EMBLEMS

HISTORY OF THE FLAG

The *first flag* in India was hoisted on August 7, 1906 in the Parsee Bagan Square, Calcutta. The flag was composed of horizontal stripes of red, yellow and green.

The *second flag* was hoisted by Madam Cama and her band of exiled revolutionaries in Paris in 1907. It was similar to the first flag with slight modifications.

The *third flag* was hoisted during Home Rule Movement in 1917 by Dr. Annie Besant and Tilak. This flag had five red and four green horizontal stripes and in the left hand top corner (the pole end) was the Union Jack occupying one-fourth of the space and seven stars in the centre. There was also a crescent and a star in one corner.

The *Tricolour* was first born at A.I.C.C. meeting at Bezwada in 1921 when a flag was shown by an Andhra youth and improved by Mahatma Gandhi with the addition of a white stripe and charka. Though not officially accepted by the Congress, it was hoisted on all Congress occasions. In 1931, when A.I.C.C. met at Karachi, a resolution was passed stressing the need for a national flag. In the same year a resolution was passed adopting a tricolour flag as our National Emblem. It had three colours : saffron for courage and sacrifice, white for truth and peace, green for faith and chivalry. It also carried a charka in blue on white band. The size was three breadth by two breadths. On July 22, 1947 with the attainment of independence, the Constituent Assembly adopted it as free India's national flag. The colours and their significance remain the same. The *Dharma Chakra* of Emperor Asoka was adopted instead of Charka.

The Flag of India—The Flag of India has three bands arranged horizontally. The colours are in the following order—saffron on the top, white in the middle and dark green at the bottom. The emblem of the flag is the exact reproduction of the wheel on the capital of the Asoka pillar at Sarnath, superimposed in the middle of the central band, and is as broad as the white strip. It has twenty-four spokes. The colour of the emblem is dark blue. The wheel is to be painted, printed, superimposed or embroidered on both sides of the flag. Also the superimposed cloth must be of the same material as that of the body.

Standard National Flag—The National Flag was first adopted by the Constituent Assembly of India on July 22, 1947, when a resolution describing the flag was adopted. It was presented to the nation by the women of India at the mid-night session of the Constituent Assembly on August 14, 1947. According to the resolution, the ratio of the width to the length of the flag was to be 2 : 3.

The cloth used for the standard flag is hand-spun and hand-woven khadi. The standard prepared by the Indian Standards Institution prescribes the dimensions of the various parts of the flag. The four standard lengths of the flag are 36, 72, 144 and 252 inches and the widths corresponding to them are 24, 48, 96 and 168 inches respectively. The size of the motor car flag is nine by six inches.

The standard for Asoka Chakra with its twenty-four spokes and its outer and inner diameters, its central circular portion, the thickness of the spokes at two crucial points, their spacing etc., have all been specified in a table of dimensions. The Asoka Chakra will be navy blue.

As for the shades of the colours in the flag it has been specified that the three colours in the bunting, namely India saffron (kesari), India green and navy blue should correspond, when visually examined in ordinary daylight, to the colours in the sealed standard flag held in the custody of the Indian Standards Institution .In order to ensure uniformity of shades of colours on a permanently scientific basis, colour values in terms of trichromatic co-efficients, corresponding to the colours of the original Constituent Assembly flags, have been prescribed.

NATIONAL EMBLEM

The National Emblem is replica of the capital of the Asokan pillar at Saranath and is formed of three lions mounted on an abacus with *Dharma Chakra* carved in relief in the centre, a bull on the right and a horse on the left, and the outlines of the *Dharma Chakra* on the extreme right and left. The words *Satyameva Jayate* meaning 'truth alone triumphs' are inscribed in Devanagri script below the emblem. The lion capital was adopted as National Emblem on January 26, 1950.

NATIONAL SONGS

The Constituent Assembly of India on the 24th January, 1950 adopted Rabindranath Tagore's song *Jana-gana-mana* as the national anthem of India. It was concurrently decided that Bankim Chandra Chatterjee's *Bande Mataram* shall have equal status.

TRANSPORT AND COMMUNICATIONS

1. RAILWAYS

Importance of Indian Railways—The Indian railway system is the biggest in Asia. The railways are India's life lines. In inter-regional traffic, 80 p.c. of the goods and 70 p.c. of the passenger traffic are carried by rail. The total investment on the railway exceeds Rs. 800 crore and the staff employed number about a million. With the integration of former Indian States, the Government of India now own almost the entire system of Indian Railways. On April, 1952 the total route mileage was 34,123·24 out of which all but 776·10 miles were managed by the Government.

Beginning of Railways in India—In his famous minute of April 1853, strongly advocating the construction of a network of trunk railway lines, Lord Dalhousie, the Governor General of India wrote, "Great tracts are teeming with produce they cannot dispose of, others are scantily bearing what they would carry in abundance, only if it could be conveyed whither it is needed."

The first idea of rail-roads in India was conceived in the Madras Presidency as early as 1831-32 when a proposal to lay flat parallel rails on a side of an improved road between Cauverypattam and Caroor, a distance of 150 miles was mooted, with a view to enable animal-driven vehicles to be drawn thereon. The more regular railway projects, however, date from 1844 when the Board of Directors of the East India Company sanctioned the construction of one line from Calcutta to the north-west and another from Bombay to the east and the north. The first line to be opened was a small section of 22 miles by the G.I.P. Railway between Bombay and Kalyan in April 1853. The E. I. Railway line between Calcutta and Pandooa was the second to follow in August 1854 and Madras had the line upto Arkonam opened in July, 1856.

Terms for Opening Railways—In the early stage (between 1844 and 1868) the construction of railways in India was entrusted to British Companies under State guarantee of a minimum return, of 4½ p.c. to 5 p.c. on the capital invested. Government provided the land free of cost but retained the right to purchase the lines after 25 or 50 years on certan terms. By 1869, 4,255 miles were constructed under such terms with a capital outlay of about Rs. 89 crores.

This policy, however, entailed heavy loss to the State, amounting by 1869 to about Rs. 1·7 crores and after an unsuccessful attempt to enlist the co-operation of companies without any guarantee of return, Government adopted the policy of direct ownership, construction and management by the State. Between 1869 and 1879 about 2,175 miles of lines were so constructed.

The policy of direct State construction, however, did not bear fruit as expected, specially because the exigencies of time necessitated the diversion of capital resourcs of the State to other directions and political and strategic considerations had led to the spending of large sums on unproductive lines. Between 1874 and 1878 the country was visited by acute and widespread famines, and the Famine Commission appointed in 1878 strongly urged the early extension of the railway net-work. Company construction was thereafter revived and even for State-owned lines management by companies was favoured.

In dealing with the guaranteed companies, the Government exercised as far as found desirable their rights to terminate the contracts as and when opportunities arose in subsequent years, the method of making use of this right and the manner of continuing management of the railways after State acquisition having differed in different cases. The E.I., S.I., G.I.P., B.B. and C.I., S.M., and B.N. Railways were acquired by the State but allowed to be managed by the original companies after securing more favourable financial conditions for the State, the E.B., O.R. and Sind Punjab and Delhi lines purchased and transferred to State management. The Bengal Central line was purchased and amalgamated with the E. B. Railway and the Madras and Indian Midland lines were after acquisition allowed to be managed by companies running adjoining lines.

New Era Begins—With the beginning of the 20th century a new era began. Traffic had grown enormously and the railways had ceased to be a burden on public exchequer. In 1901, Mr. Robertson, a Special Commissioner appointed to enquire into the working of the railways, examined the pros and cons of State vs. Company construction and management and although no marked superiority in favour of companies was observed, he advocated the discontinuance of dual system running side by side and advised the leasing out of all lines to companies, with or without guarantee. Public opinion in India had, however, ceased to remain inarticulate and strong feelings were entertained against management by English Companies, which often acted against the best interests of the people and stood in the way of Indianisation and advancement of Indian trade and industry. The old policy, shaped between 1880 and 1884 was allowed to be continued till 1920-21.

In 1921 a Railway Enquiry Committee under the Chairmanship of Sir William Acworth examined critically the question of State *vs.* Company management and advocated State-management.

In 1923 the Indian Legislative Assembly adopted a resolution advocating State management only and it was decided to eliminate the system of management by Board of Directors in London as and when opportunities to terminate the contracts with companies were available. Accordingly the East Indian Railway was taken over under direct State management in January 1925 and the G. I. P. Railway in July next year and since then all company-managed lines have been taken over.

Railway Committees—For the improvement of railway management and also to settle the State *vs.* Company management question *Acworth Committee* was appointed in 1921 which made various recommendations for the improvement of Indian Railways. Its main recommendations were : (1) Railways to be managed by the State instead of Company management. (2) Railway Budget should be separated from the general budget and that the general revenues should receive annual contributions from railways. (3) Establishment of Rates Tribunal to adjudicate upon disputes between railways and the public.

The Acworth Committee laid the fundations of State management and State Control of India Railways. Its recommendations constituted the broad basis on which the railway system in India developed in subsequent years.

The *Pope Committee* was appointed in 1932 which *inter alia* made many recommendations in regard to the intensive use of locomotives, coaching stock and machinery. Disposal of uneconomical wagons, combining resources between railways, ticketless travel and methods of increasing earnings.

The *Wedgwood Committee* in 1936 made the following recommendations : (1) reduction in locomotives and carriage under repairs, (2) amalgamation of workshop for construction of rolling-stock, (3) acceleration of trains, (4) withdrawal of unremunerative services, (5) greater caution in capital expenditure, (6) a campaign to root out dishonesty and incivility from amongst railway staff. (7) development of the commercial departments of railways, (8) building of a General Reserve Fund to serve as an equalisation fund for payment of interest charges and amortisation of capital.

Indian Railway Enquiry Committee—The Committee appointed by the Government of India published its report in 1948. The main findings and recommendations are (*a*) the staff strength in the railways is on the high side while there has been general deterioration in the efficiency of workers, (*b*) in place of present central organisation under which the Railway Board is part of the Secretariat of the Government of India, the Committee recommended the vesting of control and management of Indian Government Railways in a Statutory Authority, (*c*) it is desirable to have in the Finance Branch of the Railway Board a separate unit primarily concerned with exploring means to improve earnings, (*d*) no capital outlay should be incurred other than on strictly financial considerations, except when a capital expenditure is justified on other important considerations, (*e*) an Amortisation Fund should be created (as recommended by the Wedgwood Committee) in respect of intangible assets of the railways amounting to about Rs. 68 crores, the annual contribution to the fund being one per cent of gross earnings, (*f*) the existing method of making *ad hoc* contribution to the General Revenues has to continue until the future position of the railways can be assured with greater definitions.

Railway Stores Enquiry Committee—was set-up under the Chairmanship of A. D. Shroff to examine the Stores arrangements on the railways with a view to bringing about improvement and rationalisation in procurement, issue and holding of stores in 1951. The Committee recommended that Ministry of Railways should be responsible for the procurement of specialized Railway Stores. This recommendation has been accepted. The procurement of specialised railway stores will be transferred to the Railway Board.

Railway **Board**—The responsibility for overall control and administration of the railways vests in the Railway Board. First set-up in 1905, the Board now consists, after reorganisations in April 1951, of a Financial Commissioner and three functional members, one of whom also acts as the Chairman of the Board and *ex-officio* Secretary to the Ministry of Railways.

Finance: Railway Separation Convention—A development of far-reaching importance in railway finance is the revision of the Railway Separation Convention. The Convention was adopted in September 1924 to secure stability in general revenues and introduce flexibility in the administration of railway finance In actual operation, however, it failed to fulfil either of those objectives. In December 1949, therefore, the Constituent Assembly revised the Convention which became operative with the effects from 1st April, 1950.

Under the new Convention the relationship between railway and general finance was altered to give general tax payer the status of the sole shareholder of the railway undertaking entitled to a guaranteed dividend of four per cent, as computed annually on the loan capital invested by the Government in the undertaking. The contribution to the Depreciation Fund was fixed at a minimum of Rs. 15 crores a year which amount was raised in 1950-51 to Rs. 30 crores, thus permitting additional appropriations being made when railway surpluses permitted. The revised rules of allocation of expenditure between capital and revenue further sought to correct the over-capitalisation which was unavoidable in the earlier procedure. The full costs of replacement, including the improvement and inflationary elements were henceforth to be charged to the Depreciation Fund. A *Development Fund* was constituted with the balance of Betterment Fund for the purpose of financing expenditure on passerger amenities, labour welfare, and projects deemd necessary and useful to the national economy, though unremunerative at the time of construction. Lastly, the Loan Account was separated from the Block Account, the former representing the capital at charge and the latter the assets of the undertaking, whether financed from revenue or from loans. The convention was to hold good five years.

First five year Plan—In the First five year plan, a provision of Rs.,400 crore has been made for railway projects to be spent at the rate of Rs. 80 crores per annum.

New Fare Structure—Fare structure of Indian Railways were rationalised in 1948 entailing an average increase respectively of 46 and 73 p.c. in the rates. In view of the steep rise in the general price level as well as in the costs of operation and replacement in the railways, a further increase in passenger fares was announced on April, 1951. The passenger fares per mile in pies now stand as follows :—air conditioned 30 ; first class 27 ; second class 16 ; Inter class, Mail or Express 10½ ; inter class ordinary 9 ; third class, Mail or Express 6 ; third class, ordinary 5.

New Rates Structure—New rates structure has been introduced from 1st October, 1948. With a few exceptions, all the Indian Government and Indian State Railways were taken as a single unit for the purpose of charging. Class rates numbering 15 and the wagon load scales numbering ten were introduced in place of the previous 16 class rates and 27 schedules. All the classes and the wagon load scales have been uniformily framed on the telescopic basis, rendering the charges for longer distances cheaper. The schedule rates quoted by individual railways were cancelled, as also a number of station-to-station rates, which were either uneconomical or unused. The terminal, transhipment and short distance charges have been fixed on a uniform basis, applicable to all railways without exception. Goods traffic is now charged on the shortest route principle, with a weightage of 100 miles for a break of gauge transhipment for determining this route when there are two or more routes between the same stations. The class rates as well as wagon load scales are calculated on the aggregate distance from the starting station to destination, by a shortest route as reckoned above and not on the separate distance over each railway. In respect of classification of goods, owners' risk rates were cancelled for a number of articles carried in wagon loads, *e.g.* grain and pulses, sugar, jagree, cement and iron articles, thereby throwing on the railways, greater responsibility for safe conveyance of these articles. Charges for parcels and passengers' luggage were revised and for the first time a terminal charge of 8 pies per maund for each end is levied on them. With the effect from Sept. 1, 1948, a single revised scale for coal was introduced in place of several scales.

Railway Workshops—Studded all over the country are a scores or so of loco and carriage workshops which form the backbone of our entire railway system. They serve as hospitals for worn-out and out-of-condition rolling stock as well as centres for manufacture of wooden coaches, special types of wagons and spare parts. The following are the leading workshops—(1) workshops at Golden Rock near Trichinopoly seving the needs of Southern Railway and providing employment of about 25,000 workers. (2) Loco, Carriage and Wagon workshop at Perambur on the Madras-Arkonam line (3) Loco Carriage and wagon workshop at Mysore (4) Loco Carriage and wagon workshops at Hubli (5) Railway workshop on Kharagpur employ a little over 11,000 men. (6) Carriage and wagon shops at Ajmer. (7) Northern Railway have following major workshops—at Jamalpur, Lillooah, Kanchrapara, Charbagh and Alambagh in Lucknow. The Central Railway has the following workshops—Loco workshop at Parel, carriage and wagon workshops at Matunga, Lallaguda workshops. O. T. Railway has got the following three workshops—at Gorakhpur, Izatnagor (Bareilly) and Samastipur.

Training Centres—Training facilities for officers in the Engineering and Traffic Departments are provided in several railway training and technical institutes. The more important ones are located at Jamalpur, Gauhati, Chandausi, Bina and Saharanpur. Training of higher staff for Indian Railways began on 31st January 1952 when the Staff College for Indian Railways was opened at Baroda.

Railway Research—A great expension has taken place in research and testing activities of railways. During 1952-53, an organisation was set up under a Director of Research, Railway Board, with head quarters at Lucknow and with two sub-centres, one at Chittaranjan and the other at Lonavla in Bombay. The Sub-Section at Chittaranjan is being equipped for starting chemical and metallurgical research, while that at Lonavla will deal with problems connected with buildings, concrete etc.

Regrouping of Railways—Large scale administrative organisasation of the railways had become necessary for efficient functioning and economy in management. A Committee of Railway Board was thus appointed early in 1950 to consider in all its aspects. The Committee recommended that different railway systems should be welded togather to form one co-ordinated railway undertaking divided into six major zonal system. The 42 railway systems which existed in 1948 consisting of 13 class I railways, 10 class II railways and 19 class III railways have been consolidated into six zonal systems operating the entire broad gauge and metre gauge lines of the country. The regrouping of India railways began in 1951. The main principles governing the regrouping are :—

1. Every railway administration should serve as far as possible a compact region.

2. It should be large enough to provide a headquarters organisation of the highest calibre capable of following and assimilating up-to-date improvements in railway techniques and equipped with adequate workshop facilities and statistical, training and research institutions.

3. Regrouping should cause the minimum dislocation in existing arrangements and should be so phased as to prevent any kind of

dislocation or even temporary diminution of the quantity or efficiency of railway service.

The six zones of the Indian Railways are now as follows—

Zone	*Former Rys. included*	*Head quarters*	*Track mileage*
Southern	Madras and South Mahratta, S. I. & Mysore Railways	Madras	5,999
Central	G. I. P., Nizam State, Dholpur and Scindia Railways	Bombay	5,398
Western	B. B. C. I., Saurashtra, Rajasthan and Jaipur Railways	Bombay	5,986
Northern	East Punjab, Jodhpur, and Bikaner, Parts of E. I. and B. B. C. I. Railways	Delhi	5,259
Eastern	B. N. and major part of E. I. Railways	Calcutta	5,605
North-Eastern	O. T. and Assam plus parts of B. B. C. I. and E. I. Railways	Gorakhpur	5,557

Narrow gauge railways owned and operated by private companies were not included in the reorganisation scheme but under the Railway Companies (Emergency Provisions) Act 1951, the Central Government has assumed power to ensure their being operated efficiently and in public interest.

SOME RAILWAY ORGANISATIONS

Central Standard Office—A separate self-contained organisation called Central Standard Office, for the conduct of all works connected with the production of standard design and specifications for all materials, plant and rolling stock in use on Indian railways was formed in 1930. Three separate branches of this office deal respectively with mechanical engineering standards, civil engineering standards and specifications, while a separate research branch, constituted at a later date undertakes civil and mechanical engineering research.

Indian Railway Conference Association—This Association was first organised in 1871 mainly for the interchange of rolling stock between broad gauge railways. The present non-official organisation was inaugurated in 1902 when a formal resolution was passed, establishing the permanent Conference, independent of Government with the name of the "Indian Railway Conference." The Association's main function has been to frame rules for the carriage and interchange of the passenger and goods stock, as well as to regulate the rates and fares and conditions under which the traffic shall be carried.

Standards Advisory Committee of experts has been set up to introduce standardization in railways working and to remove wide divergencies regarding the stores nomenclature, servicing and repairs to rolling stock, methods of training staff etc.

Consultive Committees—In order to afford frequent opportunities for closer consultation between railway users and the railway administrations at different levels on matters relating to the service provided by the railway, consultive committees have been established, in place of the advisory committees—

(1) *Railway-users' Consultive Committees* at the regional or divisional levels;

(2) *a Zonal Railway users' Consultive Committee* at the headquarters of each railway, and

(3) *a National Railway users' Consultive Committee* at the Centre.

The Railway Users' Consultive Committees in the regions or divisions will represent the local users in the territories served by the railways including agricultural interests. The National Railway Users' Consultive Committee at the Centre will deal with matters of all India importance relating to the services and facilities provided by the railways, while the zonal committees would deal with similar matters in regard to the respective zones.

Railway Rates Tribunal—This Tribunal has been established in 1948 in place of Railway Rates Advisory Committee. This is the important step by Government in the development of its freight policy. The Tribunal is authorised to entertain complaints that railway administrations are exercising discrimination, quoting unreasonable rates, attaching unreasonable, conditions to the rates or are unreasonably refusing to quote a fair station-to-station rate. The Tribunal will deal only with freight rates and have mandatory jurisdiction. It consists of a President and two members. To assist the Tribunal, two panels of assessors is constituted, one representing trade, industry and agriculture and the other, the other railways.

Central Board of Transport—has been formed to deal with the major problems of transport in the country and it formulates broad policies. The two main objectives of the Board are (1) maximum co-ordination of all forms of transport and (2) the co-ordination of transport planning and its execution with the plans for agricultural and industrial development. The Board's objective is to secure the optimum movement of goods according to priority and simultaneous relieve the strain on railways by harnessing other forms of transport.

Tourist Traffic Committee—The Ministry of Transport has constituted in 1949 an *ad hoc Tourist Traffic Committee* consisting of the representatives of ministries concerned and tourist, transport and hotel industries. The committee advises the Government with regard to matters which affect tourists visiting their country. Regional Tourist offices have been opened at Bombay, Delhi, Madras, Calcutta. India has now a net work of tourist offices working in close collaboration with State Governments, travel agents, hotels and carriers. The governments have opened a tourist bureau in New York. The Central Tourist Advisory Committee which coordinates the work at the Centre on tourist problems, was reconstituted in 1952.

INDIAN RAILWAYS, 1953

Indian Railway systems have been classified under three classes for statistical purposes—(1) Class I Railways with gross earnings of Rs. 50 lakhs and over a year (2) Class II Railways with gross earnings of less than Rs. 50 lakhs a year but exceeding Rs. 10 lakhs a year (3) Class III Railways with gross earnings of Rs. 10 lakhs and under a year.

Class I Railways	*Route mileage*	*Owned by*	*worked by*
1. *Central*			
(a) Central	5,288	Indian Govt.	Indian Govt.
(b) Elichpur-Yeotmal	118	Branch Line Co.	Indian Govt.
(c) Pulgaon-Arvi	22	"	"
2. *Eastern*			
Eastern	5,675	Indian Govt.	"
3. *North Eastern*			
(a) North Eastern	4,729	"	"
(b) Chaparmukh Silghat	51	Branch Line Co.	"
(c) Katakhal Lalabazar	23	"	"
4. *Northern*			
(a) Northern	5,995	Indian Govt.	"
(b) Rupar Nagal Dam	34	"	"
5. *Southern*			
(a) Southern	5,837	"	"
(b) Tenali-Repalle	22	District Board Guntur	"
(c) Cochin Harbour Extension	4	Cochin Harbour Authority	"
(d) Alnavar-Dandeli	19	Govt. of Bom.	"
(e) West of India Portuguese	51	West of India Portuguese Ry. Co.	"
(f) Peralam Karaikhal	15	French Govt.	"
(g) Pondicherry	8	Pondicherry Ry. Co.	"
(h) Tinnevelly Tiruchendur	38	District Board, Tinnevelly	"
(i) Nanjangud Town Chamarajnagar	22	District Board Mysore & Mandya	"
6. *Western*	5,631	Indian Govt.	"
Total Class I Railways	33,582		

Class II Railways

	Route mileage	*Owned by*	*Worked by*
1. Barsi Light	203	Unassisted Co.	Basi Light Ry. Co.

2. Shahdara Saharanpur Light	93	Company Subsidised	Shahdara Saharanpur Lt. Ry. Co.
Total Class II Railways	296		
Class III Railways			
1. Ahmadpur Katwa	32	Branch Line Co.	Ahmadpur Katwa Ry. C.
2. Arrah Sasaram Light	65	Company Subsidised	Arrah Sasaram Light Ry. Co.
3. Bankura Damodar River	60	Branch Line Co.	Bankura Damodar River Ry. Co.
4. Barasat Basirhat Light	52	Company Subsidised	Barasat Basirhat Lt. Ry. Co.
5. Bengal Provincial	33	Unassisted Co.	Bengal Prov. Ry. Co.
6. Dasghara Jamalpurganj	9	Branch Line Co.	Do.
7. Baktiarpur Bihar Light	33	District Board, Patna	District Board Patna
8. Burdwan Katwa	33	Branch Line Co.	Burdwan Katwa Ry. Co.
9. Dehri Rohtas Light	24	Company Subsidised	Dehri Rohtas Light Ry. Co.
10. Futwah Islampur	27	Branch Line Co.	Futwah Islampur Lt. Ry. Co.
11. Howrah Amta Light	44	Company Subsidised	Howrah Amta Light Ry. Co.
12 Howrah Sheakhala Light	20	Company Subsidised	Howrah Sheakhala Lt. Ry. Co.
13. Jagadhri Light	3	Unassisted Co.	Jagadhri Light Ry. Co.
14. Kalighat Falta	26	Branch Line Co.	Kalighat Falta Ry. Co.
Total Class III Railways	461		

RAILWAY FINANCES

(*Crores of Rupees*)

	1950-51	1951-52	1952-53 *Budget*	1952-53 *Revised*	2953-54
Gross Traffic Receipts	263·01	290·82	282·16	269·55	272·28
Expenditure	215·45	229·07	224·69	225·96	228·20
Appropriation to Depreciation Fund	30·00	30·00	30·00	30·00	30·00
Net Revenue	47·56	61·75	57·47	43·59	44·08

Dividend to Several Revenues	32·51	33·41	34·00	34·11	34·77
Surplus	15·05	28·34	23·47	9·48	9·31
Appropriations to Development Fund	10·00	10·00	12·00	9·48	9·31
Do to Revenue Reserve Fund	5·05	18·34	11·47	—	—

FREIGHT, TRAFFIC & EARNINGS OF CLASS I RAILWAYS

(Monthly avarages or calendar months)

Frieght traffic & earnings

	No. of tons carried (000)	*Net ton miles (millions)*	*Earnings from (goods Rs. lakhs)*
1948	.. 8,698	1,859	9,02
1949	.. 9,824	2,085	10,95
1950	.. 10,423	2,225	11,42
1951	.. 10,449	2,329	12,42

Passengers, traffic & earnings

	No. of passengers carried (000)	*passenger miles (millions)*	*Earnings from passengers (Rs lakhs)*	*Gross earnings Rs. lakhs*
1948	.. 94,552	3,060	7,31	18,80
1949	.. 101,247	3,168	7,50	20,89
1950	.. 108,297	3,353	7,96	21,63
1951	.. 99,797	3,155	8,90	23,17

(Monthly Abstract of Statistics, July 1953)

RAILWAYS FINANCES

Operating Expenses

(Lakhs of Rs.)

1948-49	.. 1,60,41	1952-53 (Budget)	.. 2,02,70
1949-50	.. 1,81,53	1952-53 (Revised)	.. 1,88,85
1950-51	.. 1,80,23	1953-54 (Budget)	.. 1,90,99
1951-52	.. 1,94,04		

Appropriation to Depreciation Reserve Fund

(Lakhs of Rs.)

1948-49 ..	.. 11,29	1952-53 (Budget)	.. 30,00
1949-50 ..	.. 11,58	1952-53 (Revised)	.. 30,00
1950-51 ..	.. 30,00	1953-54 (Budget)	.. 30,00
1951-52 ..	.. 30,00		

Gross Traffic Receipts

(Lakhs of Rs.)

1948-49 ..	.. 2,13,10	1952-53 (Budget)	.. 2,82,16
1949-50 ..	.. 2,36,35	1952-53 (Revised)	.. 2,69,55
1950-51 ..	.. 2,63,01	1953-54 (Budget)	.. 2,72,28
1951-52 ..	.. 2,90,82		

Net Traffic Receipts

(Lakhs of Rs.)

1948-49	39,78	1952-53 (Budget)	64,23
1949-50	41,44	1952-53 (Revised)	50,45
1950-51	52,53	1953-54 (Budget)	51,08
1951-52	66,47		

Net Revenue

(Lakhs of Rs.)

1948-49	42,34	1952-53 (Budget)	57,48
1949-50	37,77	1952-53 (Revised)	43,59
1950-51	47,56	1953-54 (Budget)	44,08
1951-52	61,75		

Contribution to General Revenues

(Lakhs of Rs.)

1948-49	7,34	1952-53 (Budget)	34,00
1949-50	7,00	1952-53 (Revised)	34,11
1950-51	32,51	1953-54 (Budget)	34,77
1951-52	33,41		

Surplus or Deficit

(Lakhs of Rs.)

1948-49	+19,98	1952-53 (Budget)	+23,47
1949-50	+14,59	1952-53 (Revised)	+9,48
1950-51	+15,05	1953-54 (Budget)	+9,31
1951-52	+28,34		

P.C. of Net Traffic Receipts to Capital-at-charge

Receipts

1948-49	5·7	1952-53 (Budget)	7·4
1949-50	5·6	1952-53 (Revised)	5·8
1950-51	6·4	1953-54 (Budget)	5·8
1951-52	7·8		

Ratio of Working Expenses to Gross Earnings

(Lakhs of Rs.)

1948-49	80·4	1952-53 (Budget)	79·6
1949-50	84·0	1952-53 (Revised)	83·8
1950-51	81·9	1953-54 (Budget)	83·8
1951-52	87·8		

Ratio of Net Profit on Capital at charge

(Lakhs of Rs.)

1948-49	2·8	1952-53 (Budget)	2·7
1949-50	2·0	1952-53 (Revised)	1·1
1950-51	2·8	1953-54 (Budget)	1·0
1951-52	3·3		

Interest Charges

(Lakhs of Rs.)

1948-49	22,36	1952-53 (Budget)	..
1949-50	23,18	1952-53 (Revised)	..
1950-51	—	1953-54 (Budget)	..
1951-52	—		

Transfer to Revenue Reserve Fund

(Lakhs of Rs.)

1948-49	..	1952-53 Budget)	11,47
1949-50	..	1952-53 (Revised)	..
1950-51	5,05	1953-54 (Budget	..
1951-52	18,34		

Transfer to Development Fund

(Lakhs of Rs.)

1948-41	84	1952-53(Budget)	12,00
1949-50	..	1952-53 (Revised)	9,48
1950-51	10,00	1953-54 (Budget)	9,31
1951-52	10,00		

Repayment to Depreciation Reserve Fund

(Lakhs of Rs.)

1948-49	11,80	1952-53 (Budget)	..
1949-50	7,59	1952-53 (Revised)	..
1950-51	..	1953-54 (Budget)	..
1951-52	..		

Railway Mileage of Leading Countries, 1950

France	40,348	Canada	42,336
Germany	36,256	U.S.A.	227,244
Great Britain	19,863	Argentina	26,710
U.S.S.R.	57,487	Mexico	14,981
Italy	11,383	China	12,960
Poland	13,375	Brazil	21,251
Japan	12,572	India	34,123

Mileage of Indian Railways

1953	20	1939-40	41,156
1900	24,752	1951-52	34,119
1924-25	38,270		

RAILWAY FACTS

India has the fourth largest railway system in the world, the U.S.A., U.S.S.R. and Canada being the only three countries with a larger mileage.

* * * * *

There are 72,000 Railway Stations in India.

* * * * *

The first Indian Railway was run between Bombay and Kalyan, a distance of 32 miles on 16th April, 1853.

* * * * *

Third class passengers contribute 90 p.c. of the railway receipts.

* * * * *

First electric train in India ran between Victoria Terminus (Bombay) and Kurla in 1925.

* * * * *

Bombay, Poona and Madras are the three main Indian cities from which electric trains operate. In the whole of the Indian Union, electrified railway router-mileage is only about 240 miles or less than one per cent of the total railway route-mileage in the country.

* * * * *

Locomotive factory at Chittaranjan commenced production in Nov. 1950.

* * * * *

Most Indian railway gauges are five feet six inches wide and they are the broadest in the world.

* * * * *

Indian Government Railways are by far the largest industrial concern under one management in the country. Indian Railways stand to-day as the greatest State enterprise in Asia.

* * * * *

The Railways' requirements for coal is 10 million tons annually.

* * * * *

The famous trains of India are the *Deccan Queen* of the Central Railways which links Bombay with Poona. It is the fastest short distance train maintaining for sometime a start to stop speed of 45 miles per hour. *Flying Ranee* run by Western Railway between Bombay and Surat is the only corridor train in India. *Delhi Madras Grand Trunk Express* runs, 1,361 miles and traverses half the sub-continent of India serving such important towns as Bezwada, Nagpur and Agra. By far the most exciting and popular train is the Eastern Railway's crack express *Toofan Mail* between the capital of India and the capital of Bengal. *Frontier Mail* though shorn of its previous grandour, provides the shortest and the quickest service between Bombay and the North.

* * * * *

Indian Railways completed their 100 years on April 16, 1953.

* * * * *

Indian Railways carry 80 per cent of the internal goods traffic and 70 per cent of the passanger traffic.

* * * * *

Railway Board came into existence in March, 1905.

* * * * *

With a capital of 860 crores of rupees invested by the State, the Indian Railways are one of the largest enterprises of the world.

* * * * *

Biggest Indian Railway tunnel is the Torsi Tunnel which is three quarters of a mile long.

* * * * *

The first air-conditioned coach to run in public service in India was attached to an Indian train in 1937 between Bombay and Delhi.

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2. ROADS IN INDIA

Utility of Roads in India—The importance of roads and the facilities of transport in a vast country like India can scarcely be exaggerated. A system of well-kept and well-constructed roads is essential for country's economic and cultural progress. The roads have also a vital role to play in the defence of India. The effectiveness of defence depends on the ability of our armed forces to concentrate at any threatened point within shortest possible time. So the effectiveness of our defence to a large extent depends on the efficiency of our road system. India's deficiency in the matter of roads has contributed very largely to her agricultural commercial and industrial backwardness to-day. The most serious defect is the lack of proper and adequate road communication between villages and markets. Another aspect of the inadequacy of our road system is that it is unbalanced. The trunk roads are, for example relatively more highly developed than the district and village roads.

India has lagged behind many other countries in the development of roads. There exists only ·22 miles of road per square mile of territory and, of this, barely one-third is fitted for motor traffic. With an area of 11 lakh sq. miles, India possesses only 255,460 miles of roads. For every thousand of the population, India has not even three quarters of a mile of road as against 3·6 miles in the United Kingdom and 21 in U.S.A.

Short History of Road Progress—The present road system is a superstructure raised on the old Mughal and other roads. Its development began about one hundred years ago under the auspices of the Government of India. But Government's entire energy being directed towards opening of railways, the roads came to be regarded as of local importance, a fit subject for devolution. The culmination of the lack of interest was reached in the Government of India Act of 1919 which transferred the subject to the provinces. The Central Government ceased to concern itself with road development except roads of military importance and certain arterial roads in Indian States, the provinces in their turn placed greater part of road mileage in the charge of local bodies taking direct responsibilty for the maintenance and construction of only a strictly limited mileage.

But the circumstances changed after the World War I. Motor transport began to come in the forefront and it became a common feature on the principal roads throughout the country. The result was that the road expansion could not keep pace with the increase of motor traffic and the existing roads began to deteriorate. A resolution was carried in the Council of State in 1927 for the improvement of road system with the result that a committee of both the chambers of the Central Legislature was set up under the chairmanship of Dr. M. R. Jayakar to investigate and report. The Jayakar Committee in 1928 reported that onus of road development was passing beyond the capacity of provincial governments and local bodies, that it was becoming a matter of national importance, and to that extent might be a proper charge on central revenues. The Committee recommended that the Centre should assist co-ordinated development by making annual block grants to provinces from out of a Central Road Fund built up by a petrol tax surcharge of two annas per gallon. The Committee considered that the balances in the Fund should not be allowed to lapse at the end of each year, as road programme was required to be planned and executed over a member of years and for this purpose continuance of funds should be assured. The Jayakar Committee also recommended the setting up of (*i*) a separate road Development in the Central Government, (*ii*) a Transport Advisory Committee consisting of the representatives from Central Government and the Provinces, (*iii*) a Central Organisation of Information and Research. A *Central Road Organisation* was set up in 1930 and a *Transport Advisory Council* in 1935. On the recommendation of the Jayakar Committee, also a Road Conference first met in 1931 to discuss various technical matters.

Road Administration—since 1919 the provinces have been solely responsible for the maintenance and construction of roads. The Central Government's interest in roads was confined to sanctioning block grants to the provinces from Central Road Fund. From 1st April, 1947, the Central Government have assumed additional financial responsibility for the construction and maintenance of every road which is accepted by the Central Government as a National Highway—The subject "National Highway" has now been included in the Federal List of the Constitution of India.

The provincial highways are generally under the charge of provincial Public Works Departments.

The district and village roads have for many years been the responsibility of the local bodies.

Central Road Fund—The creation of Central Road Fund in 1929 on the recommendation of Jayakar Committee constitutes a milestone in the history of road transport in India. The Road Fund was to be administered by the Central Government with the advice of a standing committee of the Central Legislature. Part of the fund—one sixth—was to be reserved for central administration, research, intelligence and grants for undertakings of special or all-India importance. The balance of the fund was recommended for allocation to the provinces and States according to the consumption of petrol in each administrative unit. Block grants to the provinces from the fund were intended to augment principal allotments for road development. The Central Road Fund continues to provide an important source for financing road development and research activities. It now provides about Rs. 4½ crore annually for the development of roads other than national highways.

Although the fund is still relatively small compared with the overall expenditure on road development throughout India, the achievements of the Fund are remarkable. No fewer than 382 new bridges and causeways have been built over the country since the Fund was created and some 1,250 miles of modern surfaced roads, 1,500 miles of fair-weather roads and 2,200 miles of road reconditioning completed upto 1950.

Nagpur Plan—In December, 1943, a Conference of Chief Engineers was convened by the Government of India at the instance of the Indian Road Congress. This conference is an important landmark in the history of Indian roads so far as the road development in India is concerned. This conference drew up a ten-year plan of road development which is known as *Nagpur Plan.* The Nagpur Plan provided for the balanced development with the objective that no village in a wholly agricultural area should remain more than five miles from a main road, while in a non-agricultural area, no village should be more than 20 miles from a main road.

The Conference classified roads under the following heads—*National Highways, Provincial or State Highways, Major District Roads, Minor District Roads* and *Village Roads.* National Highways is to be the frame-work for the country's road system. The *National Highways* will connect capitals of provinces and States, ports and highways and constitute the main arteries of communication in the country. They will include roads of strategic importance. The *Provincial or State Highways* will be the main trunk roads of a province or state. *District Roads* will connect areas of production and markets with either a highway or a railway. They will also form the main links between headquarters of neighbouring districts. *Minor District Roads* and *Village Roads* will mostly meet the requirements of rural population, they connect villages and group of villages with one another and with nearest district road or river ghat.

Nagpur plan recommends the assumption by the Central Government of complete financial liability covering both fresh development and annual maintenance for roads designated as National Highways. These are to be administered by an impartial Road Board. With the effect from 1st April, 1947 complete financial liability for the construction and maintenance of every road which is classified as a National Highway has been undertaken by the Government of India.

Proposed National Highway routes generally follow the existing trunk roads which are already largely surfaced. The total mileage of National Highways is about 13,300. These *include Grand Trunk Road North* (Delhi-Amritsar-Pakistan-border), *Grand Trunk Road East* (Delhi-Agra-Kanpur-Calcutta), *Bombay-Madras Road, Calcutta- Madras Road,* and *Banaras-Cape Comorin Road.*

Indian Roads Congress—The Central Government took steps to promote the creation of a semi official body known as *Indian Roads Congress* in 1934. The membership of the body is open to qualified engineers dealing with roads. The Roads Congress is designed to provide a forum for the regular pooling of experience and ideas on all matters affecting the construction and maintenance of roads, to recommend standard specifications, and to provide a platform for the expression of professional opinion on matters relating to road engineering, including such questions as those of organisation and administration.

The most important contribution of Indian Roads Congress to the science of road engineering in India, besides the study of roads from various aspects, is the "standard specifications and Code of Practice for Road Bridges in India" which has been accorded general acceptance throughout India.

When the highway engineers got busy to complete the projects and were ready with their blueprints to start work, a sudden set back came in the shape of the partition of India which dislocated all transport and various organisations concerned with the procurement of road materials. The financial stringency of the Government of India compelled the progress to slow down. As a result, in the period of three years from 1947, not even one hundredth part of the Nagpur target of building and improving roads could be completed.

GOVERNMENT ORGANISATIONS—At the Centre. the Government have built up the *Central Roads Organisation* under the Consulting Engineer to the Government of India (Roads). The Roads Organisation activities are not confined to National Highways, it tackles a host of other problems concerning road development in general, grants to State governments, for development of roads other than National Highways, road research, road statistics, bulk procurement of machinery and overseas training of road engineers.

RESEARCH AND TECHNICAL ACTIVITIES AND TRAINING—The Central Designs Office of the Road Organisation deals with such items, such as, type designs for route marking for the national highways and for furlong and boundary stones, principles to be followed in the erection of advertisement boards on road-sides, form of recording data on bridges, etc.

Central Road Research Institute has been started at Okhla in Delhi in 1952 for the research on road engineering in its various aspects and construction and maintenance of all kinds of roads. Technical advice is also given to State Governments on various problems concerning road works.

Facilities for acquiring advanced practical training in modern methods of highway and bridge engineering are now being provided under various Schemes, such as under Commonwealth Technical Cooperation Scheme, Point-Four Aid Programme. The Central Roads Organisation also imparts training to engineers from State Governments in modern methods of road and bridge designs.

ROAD TRANSPORT—Motor vehicles are now plying an important part in the road transport of India and are slowly replacing bullock-cart. Direct taxation of motor vehicles is a state subject in India. The basis of taxation varies from state to state. In addition to state taxes, municipalities also impose wheel taxes on vehicles in Bombay and the Madhya Pradesh. Indirect taxes on vehicles are levied by Central Government in the shape of import duty on motor vehicles and spare parts, import and excise duty on pneumatic tyres and import and excise duty on petrol. A sales tax is also levied on petrol in all States.

Under Indian Motor Vehicles Act, each State is divided into two or more regions with a *Regional Transport Authority* in each such region. To co-ordinate the work of Regional Authority there is in addition a *Provincial Transport Authirity* in each State. The Act has also provided for compulsory insurance of motor vehicles in respect of third parties.

For securing effective co-ordination between road and rail transport in India, it has been agreed that there should be a fusion of the financial interests between railways and large road transport undertakings. The railways are already participating in such undertakings in Bombay, M.P., and Orissa. Planning Commission has recommended the setting up of Corporations wherever the road transport services are run by the State. The Statutory Corporations for operating road transport services already exist in Bombay, Delhi and Bilaspur. The Road Transport Corporation Act 1950 was extended to the States of Bihar, Mysore, Hyderabad and Kutch to enable the formation of similar Corporations.

Nationalisation of Transport—About all the major states of India have accepted nationalisation of bus services as a basic policy and many have reached a stage where they have nearly taken over the entire private bus transport in their area. The process of nationalisation is not uniform throughout India. In Bombay and Madhya Pradesh, the nationalised service is operated by a quasi-public corporation. In Punjab, Uttar Pradesh and Madras the motor services are run departmentally, but except Madras State Services extend over muffasil routes also. Orissa has a similar service covering three of the five zones into which the state is divided for the purpose. West Bengal has started state bus services in Calcutta. Among the former princely States, many are already operating government owned bus services. The Delhi bus service is carried on by Transport Ministry of the Government of India under an autonomous statutory body called Delhi Road Transport Authority which also took over the Delhi Transport in April, 1951.

The Government of Assam, Bihar, Hyderabad, Madhya Bharat, Mysore, Rajasthan, Saurashtra, Travancore-Cochin, Kutch, Himachal Pradesh, Manipur and Bilaspur have started Government Transport Services.

ROAD-RAIL CO-ORDINATION—Much headway has been made towards road-railway co-ordination and re-organisation of road transport—(1) city bus service of Madras has been entirely nationalized. (2) Bombay is the first State in which State Transport Corporation financed jointly by the Central and State Governments has been established with the object of providing adequate economical and efficient road transport services. (3) Government of West Bengal has set up a Directorate of Transport to work out *inter alia* schemes for the nationalisation of the passenger transport system in Calcutta and for the co-ordinated development of rail and road transport in the State. (4) Uttar Pradesh Government Roadway Organisation has introduced bus services on several new routes. (5) Punjab Government has started operation of passenger transport services in certain cities and over few rural routes. (6) Government of Himachal Pradesh has nationalized almost all road transport services. (7) In Delhi the Government has taken over the bus service from Gwalior and Northern Indian Transport Company.

ROPEWAYS—Ropeways are used in India in areas of hilly and broken country where valleys and streams abound and gradients are steep and where other forms of communication are primitive or non-existent. These conditions obtain in the foothills of the Himalayas and in some parts of south India. In India the use of ropeways is confined to the movement of materials and merchandise. The following are the Ropeways operating in India at present—(1) *Darjeeling-Bijanbari mono-cable ropeway* which is five miles long with one span of 6,000 ft. (2) *mono-calbe ropeway* at Kalimpong which climbs 3,400 ft. in its length. Both these ropeways are regarded as extensious to railway system. (3) *Cherra Chatak Ropeways* at Cherrapunji in Assam (4) *Annamalai Ropeway* in South India serves tea and coffee on the 5,000 feet high plateau.

Apart from these several purpose, public or semi-public applications, ropeways transport is extensively used in the tea planting districts. It is also found in coal-mining areas, mainly in Bihar and Bengal where it provides a particularly economical method of transporting waste to spoil dumps. It is used in the manufacture of cement and the working of quarries, mines, sand, gravel and clay pits. Ropeways are used elsewhere in civil engineering for large constructions, such as masonry dams and bridges. There are appoximately 100 ropeways operating in India today.

Road Mileage in Various Countries in Relation to Area and Population

	Mileage of motorable roads	*Mileage of unmotorable roads*	*Total mileage of roads*
India ..	181,406	57,575	239,081
U. S. A. (1940) ..	1,000,000	2,009,000	3,009,000
U. K. (1939) ..	160,120	19,170	179,290
France (1939) ..	..	..	405,028

Indian Union's Road Development Plan

	Existing	*Nagpur plan*
Total Road mileage (1943) ..	239,081	385,226
Motorable road mileage (1943) ..	181,406	289,855
Total road mileage per million persons	749·89	1,208·18
Motorable road mileage per million persons ..	568·99	909·14
Total road mileage per 1,000 sq. miles of area ..	196·45	316·53

Motorable road mileage per 1,000 sq. mile of area ..	149·06	238·17

(*From Govt. of India pamphlet "Our Roads"*)

Extra Municipal Roads in India

	Metalled				*Un-metalled*	*Grand Total*
	Bitu-minus	Con-crete	Water-bound macadam	Total (*Surfaced*)		
India (*excluding the former Indian States*)	9,036	652	54,436	62,124	1,14,659	1,78,783
Former Indian States	1,675	111	24,634	25,984	44,147	70,131
	10,711	763	78,634	90,108	1,58,806	2,48,914

Total Number of Motor Vehicles 1950-51

Motor cycles ..	27,105	Goods Vehicles ..	85,509
Private cars ..	147,953	Miscellaneous ..	3,825
Private Service Vehicles	45,753		
			310,145

3. INLAND WATERWAYS

From ancient times, the trade and commerce of northern India has been facilitated by the abundance of navigable streams. The combined mileage of the navigable rivers in northern India is about 25,000 miles. The inland navigation of India which was flourishing, received a great setback with the development of railways in India.

In the past, India has been great sea-faring country. The British Governor-General in 1880 reporting in London said "the port of Calcutta contains 10,000 tons of shipping built in India of a description calculated for the conveyance of cargoes to England." Sir William Digby in his '*Prosperous British India*' wrote that the teakwood vessels of Bombay are greatly superior to the 'oaken' of old England.

The main inland waterway system in the Indian Union are those centred upon Bengal, but canals of Mahanadi Delta in Orissa, in the Buckingham, Godavari, Krishna and Dummadudan system in Madras, and the backwaters of southern Malabar coast are still extensively used for transport purposes. Before 1947 the Bengal system made use of all the channels of Ganges-Brahmaputra Delta stretching up the Ganges into the heart of Uttar Pradesh and into Assam as far as Dibrugarh. The economic unity of this system was to some extent dislocated by partition in 1947, but has adopted to the new conditions to the advantage of the whole area. The waterway systems of north-east, consisting of some 5,000 miles of navigable channels, remain by far the most important in India and continue to serve the needs of the tea and jute industries of Calcutta to a major extent. Two of the longest routes run from Calcutta to Patna via Ganges, 920 miles and from Calcutta to Dibrugarh in Eastern Assam via Brahmaputra 1,175 miles.

The *Inland Steam Vessels Act* of 1917 was amended in 1951 in order to enforce the compulsory registration of all inland steam vessels. A non-statutory Ganga-Brahmaputra Water Transport Board was set up in 1952 to co-ordinate the developmsnt of water transport on the Ganges, the Brahmaputra and their tributaries.

The total length of the navigable waterways in undivided India was estimated at 25,000 miles. As a result of partition, the river systems in the north-east of the sub-continent are now controlled by two Governments.

Waterways & the Indian Constitution—Constitutionally, responsibility for maintenance and improvement of navigable facilities on most rivers vests in State Governments. The Central Government, is however, responsible for navigation on waterways declared by Parliament to be national waterways. The Central Water and Power Commission is the departmental body specifically responsible for surveys, planning and development of water transport. Central legislation in April, 1951, provided compulsory registration of inland steam-powered vessels. State Governments have been asked to consider the feasibility of registration dumb craft including country boats.

Research Station—A Central Government Research Station has been established at Poona which is conducting experiments designed to protect the probable future configuration of the Hooghly, the silting of which is a matter of some concern. Government of West Bengal also maintains its own research station at Haringhata near Kanchrapara.

Ganga-Brahmaputra Water Transport Board—set up in 1952 marks an important stage in the development of inland water transport in the country. The Board is under the control of the Central Ministry of Transport. The functions of the Board are the development of water transport, the improvement of navigational facilities, the handling of administrative problems such as those arising out of registration and licensing, the fixing of passenger and freight rates and the administration of a pilot project for towing country craft with shallow draught tugs, for which assistance has been sought from U. N. Technical Assistance Administration.

IMPORTANT WATERWAY PROJECTS

Some important waterway projects in various stages of construction or consideration are—

(1) A canal to link lower Raniganj coalfield with the Hooghly. This project forms a section of the general plan for the development of Damodar Valley.

(2) Works to make Mahanadi river in Orissa navigable for 300 miles up from the mouth as a result of the control over flood waters in this area which Hirakud Dam project will establish.

(3) Kakrapara project in Bombay to provide navigable channels from the sea for some 50 miles beyond Kakrapara.

(4) Ganges Barrage between the headwaters of the Hooghly system of rivers in Murshidabad district and the Ganges system in Bihar and Uttar Pradesh.

(5) A long term project for linking the east and west coasts of India through the channels of the Ganges, Sone, Rihand and Narmada rivers by means of a system of dams and locks.

(6) Deepening and general improvement of existing river channels as, for example, that of Ganges between Buxar and Allahabad.

(7) Provision of a canal between Diamond Harbour on the Hooghly and Kidderpore (Calcutta) if control of silt in the Hooghly proves very costly than an entirely new canal.

4. AVIATION IN INDIA

Beginning of Civil Aviation—Flying began in India as early as 1911 when first experimental flights were made by army officers in aeroplane sent to India for demonstrution by Bristol Aeroplane Co. On February 1911, M. Picquet, a French pilot made demonstration flights in India and carried the first official air-mail not only of India but in the world when he flew from Allahabad to Naini, a distance of six miles carrying only official air-mail. The first passanger to be carried in an aeroplane in India was Sir Sefton Branker in 1911.

After the end of World War I in 1918, the real progress of civil aviation began in India. The first regular mail service in India was organised in January 1920 on the initiative of Lord Lloyd, the then Governor of Bombay. In 1925 British Air Ministry gave a contract to the Imperial Airways Ltd. for a service between England and India.

In India Civil Aviation Department was created in 1927 for the systematic organisation of internal and international air services. First civil aerodromes were established and flying clubs were also founded and some Indian officers were sent abroad for training for future service in the Government Civil Aviation Service. On March 30, 1929, the first England India Air Service was started. At this time flying clubs of India began to be started in different provinces which greatly contributed to the training of aviation among young Indians.

In 1933 both internal and external air service began to take definite shape in India. The first Indian airlines, the *Tata Airlines* began to operate a weekly service between Karachi and Madras on October 1932. *Indian National Airways* Ltd. established in 1933 started a weekly service between Calcutta and Rangoon and a daily service between Calcutta and Dacca. The *Air Services of India* came into existence in 1937 operating air services between Bombay and a number of Kathiawar States. The next phase of development in civil aviation was the introduction of the Empire Airmail Scheme in 1938 under which all first class mails between empire countries on U.K.-Australia and U.K.-Africa routes was to be carried by air, by introducing larger aircraft and by developing passenger and freight traffic. This scheme gave an impetus to the growth of civil aviation in India. With the outbreak of war in 1939, the development of aviation in India was phenomenal. With the entry of Japan in the war, the military demand for air transport became so urgent that it was impossible for civil companies to carry on their normal traffic and finally they became contract operators for the Defence Services. The air fleets were further strengthened by the addition of Lease-Lend air craft. At the end of the World War II, India possessed several hundred aerodromes.

Period of Aviation Expansions—The tremendou developments in the air transport took place with the end of the World War. The flying was firmly established as a safe, efficient and comfortable means of transport. The volume of passenger and freight traffic increased speedily. A number of transport companies were formed and licences granted to eleven concerns. Although traffic continued to increase in volume, operation costs too, began to rise steeply. Financially the services were coming to grief and all requested for government assistance.

New Scheme of Subsidy—To tide over the financial crisis in the majority of air lines in India, the Government of India from the 1st March, 1948 was paying a subsidy to the air transport companies based on the quantity of petrol used by them ; this had obvious disadvantages and a reduced scheme of payment of subsidy was introduced from 1st October, 1951. This scheme provided for grant of subsidy to those companies which suffered a loss, the amount of the subsidy being the amount by which the actual revenue of the company from all services fell short of either the standard cost calculated by the Air Transport Enquiry Committee and revised from time to time by the Air Transport Licensing Board and or the cost actually incurred, whichever cost is lower.

Rajadhyaksha Committee—At this stage Rajadhyaksha Committee was appointed to investigate the working of the air lines and make recommendations for healthy development of air transport industry. The committee recommended, subject to reduction in costs of operation and reorganisation, the continuance of the airlines then in operation. The recommendation of the committee as well as those of Civil Aviation Department brought the issue of nationalization to the forefront. The Planning Commission after considering the financial assistance needed by the companies and the indirect subsidy already paid by the government to the extent of about rupees forty lakhs every year, came to the conclusion that the existence of a large number of companies was not in the interest of the country. The Commission recommended their merger into a state-owned enterprise. On the basis of the recommendations of the Planning Commission, the Communications Minister introduced legislation in the Parliament for nationalization of air transport in India.

Organisation of Civil Aviation—The civil aviation in India is placed in the charge of a Director-General assisted by Deputy Directors General and the functions of the Department are distributed among several directorates, each responsible for several branches of civil aviation activity. The Civil Aviation Department is at present attached to the Ministry of Communications which controls the Posts and Telegraphs Department which utilise air transport for the carriage of mails. Indian Air Force is in the Ministry of Defence but Civil Aviation is not entirely independent of military aviation. In order to coordinate policy with respect to civil and military aviation and to maintain the necessary liasion, a Standing Committee has been constituted comprising officers of the Ministries of Defence and Communication who meet as necessary for the supplement of important questions of policy.

The Director General of Civil Aviation is the administrative authority for controlling all civil aviation activities in India.

Air Routes & Aerodromes—In 1931 India started the air routes and aerodromes organisation with a nucleus of four controlled aerodromes at Karachi, Delhi, Allahabad and Calcutta. Gradually more and more aerodromes were constructed and net work of aerodromes and air traffic control were provided for the main trans-India route and main internal air routes. Following the outbreak of hostilities in the east during World War II, a well-organised system of aerodromes and air routes were developed by the military authorities with the cooperation of Civil Aviation Department. Thus after the War, Civil, Aviation Department was able to resume the normal activities with large number of aerodromes in the country for potential civil use. At the beginning of 1953, 77 air fields were being maintained and operated by Civil Aviation Department. Many new air fields are now under construction.

The expansion of services—internal as well as external—has necessitated the provision of various facilities at the aerodromes. Air traffic control services, navigational aids, air-ground and point to point radio communications have been provided throughout India. A net-work of radio beacons, radio ranges and radio direction finding stations are available to the pilot for reliable and safe navigation from one aerodrome to another. At important aerodromes Instrument Landing System is also available to aid aircraft in safe approach and landing during bad weather.

Meteorological Services to Aviation—The meteorological departments of the Government of India is responsible for providing meteorological service for aviation in India. The meteorological organisation for aviation in India is designed to provide meteorological service for aircraft commanders, for all international, major and minor aerodromes in India and for all persons concerned with aircraft operation. Warnings of adverse weather are issued, weather forecasts of different tyres are issued to aircrafts, pilots are personally briefed before take-off on the meteorological conditions expected along their routes of flights and they are also briefed on landing regarding the weather encountered by them during flight.

Aviation Training and Flying Clubs—The Flying, Aerodrome, Communications and Engineering Schools at the Civil Aviation Training Centre at Allahabad trains large number of pilots and operators. This school provides facilities for training of commercial pilots, ground engineers, aerodrome officers and communications staff.

There are ten subsidised flying clubs operating at Delhi, Bombay, Jullundur (with a satelite centre at Patiala), Barrackpur, Patna, Lucknow (with satelite centres at Allahabad and Kanpur), Bhubaneswar, Nagpur, Madras and Bangalore. These clubs train 'A' pilots, 'B' pilots and glider pilots. The amount of subsidies given to these clubs is estimated at Rs. 15 lakhs. There are also two gliding clubs at Bombay and Delhi.

An Aeronautical Society of India was organised in 1948 to promote the advancement and diffusion of knowledge of aeronantical sciences and aircraft engineering.

External Air Services—In the field of external air services, there has been steady progress since independence. Before Independence India's external services were confined only to Burma and Ceylon. To-day aircraft fly to Aden, Bangkok, Cairo, Djakarta, Dussldorf, Geneva, Kabul, London, Nairobi, Paris, Rome, Singapore and Zahidan as well as to our neighbouring centries of Burma, Ceylon, Nepal and Pakistan. Air Transport agreements have been concluded with Afganistan, Australia, Ceylon, Egypt, France, Netherlands, Pakittan, Philippines, Sweden, Switzerland, United Kingdom, U.S.A., Thailand and Iran.

India's own long distace international airlines came into being in June 1948 with the establishment of Air India International Ltd. with regular operation in Europe and East Africa. Bharat Airways commenced operation of a service to Bangkok and later extended it to Singapore and Djkarta: Himalayan Aviation Ltd., introduced weekly service between India and Afganistan. But all these Indian international airlines have been nationalised under the name of Air India International which is being operated by the Government of India.

Nationalisation of Air lines—In 1952 the Government found that a stage had been reached when under the prevailing conditions of traffic load and intensity of operation, the air transport industry could not develop on an economic basis under private enterprise. The Planning Commission recommended that the industry should be consolidated and taken over by the Government. Accordingly, the Air Corporations Act which was passed in May, 1953, provides for the establishment of two Air Corporations—to be known as *Indian Air Lines Corporation* and *Air India International*—to operate the internal and external services respectively.

The nationalization of Indian air transport represents the fruition of the first major attempt of free India's national Government to nationalise an important undertaking like civil aviation. From 1st August, 1953 all Indian air lines have been nationalised and the planes employed in the internal services now bears the marking *Indian Airlines Corporation,* while the planes flying on the international routes will bear the marking *Air India International Corporation.*

The *advantages of nationalisation* can be briefly listed as follows :—

(1) The available resources in equipment, workshop capacity and technical personnel would be used to the maximum benefit.

(2) From the point of view of defence, operation of all air services by a State organisation would obviously be the most desirable arrangement.

(3) Air Transport is a public utility and ought to be developed to serve national interests.

(4) Rapid developments are taking place in the techniques of civil aviation and only a State organisation can command the resources to take the fullest advantage of these technical development.

Two Coporations—Two Air Corporations have been brought into existence on the 15th June, 1953 under an Act passed in 1953—*Indian Airlines Corporation and Air India International Corporation.* The Indian Airlines Corporation has taken over and have been managing all domestic air services, whereas Air India International Corporation has taken over long distance international air services.

The Chairman and members of the two Corporations have been appointed by the Government and the Government have the power under the Act to issue directives to the Corporations in the national interest. The Corporations are to submit to Government their annual programme of operations with financial estimates. The accounts of the Corporations will be audited by the Controller and Auditor-General. The accounts and the audit report will be placed by Government before Parliament. From August 1, 1953, the assets and liabilities and all the rights and privileges of the companies have been transferred to and vested in the Corporations. To achieve co-ordination between the two Corporations, an *Air Transport Council* will be set up. It will advise the Government on such matters as fares and freight rates, charges for the carriage of mail, and the adequacy and efficiency of the services. Each Corporation will have an advisory committee also. This will provide representation to those who will use their services and enable them to place their points of view before the management.

Labour Committee—A Labour Relations Committee is also to be established for each Corporation. It will comprise representatives of the Corporations and its employees in equal numbers. The Committee will foster cordial relations between the employees and the employers.

Compensation—Government will negotiate with each air company in order to arrive at an agreed figure of compensation on the basis of the principles laid down in the Act. To resolve differences between the Corporations and the air companies regarding the amount of compensation, provision has been made for the setting up of a tribunal. The tribunal will ,consist of three persons, one of whom will be a High Court Judge. A portion of the compensation is to be paid in cash. For the balance, bonds are to be issued by the Corporation. These bonds will bear interest at the rate of three and a half per cent per annum and will be negotiable.

Merger of Companies—The Indian Airlines Corporation has taken over from 1st August the undertakings of the eight air companies

(*The Airways India Ltd., Bharat Airways Ltd., Himalayan Aviation, Kalinga Airlines Ltd., Indian National Airways, Deccan Airways, Air India Ltd., and Air Services of India Ltd.*), who mostly ran domestic services. The Corporation has appointed seven *resident representatives* to take over and to operate the services which are now being run by the eight air companies. Each representative will be responsible for a particular line which with one exception, will cover the activities of one or other of the existing air companies. The eight services have been grouped into seven lines under seven resident representatives, three of them having their headquarters in Calcutta, while the others will have their headquarters at Delhi, Bombay, Madras and Hyderabad.

Regional Representatives—In order to co-ordinate the operations of the various lines of the Corporation, two regional representatives have been appointed. Regional Representative stationed in Calcutta will be in charge of the Calcutta-Delhi region controlling lines 1, 2, 3 and 4 (formerly Airways (India) Ltd., Bharat Airways Ltd., Himalayan Aviation Ltd., and Kalinga Airlines and Indian National Airways Ltd., respectively), while Regional Representative in Bombay will be in charge of the Bombay-Hyderabad region controlling lines 5, 6 & 7 (formerly Deccan Airways, Air India Ltd. and Air Services of India), respectively.

LINE SYSTEM

Line I (Formerly Airways India)

Calcutta, Bhubaneswar, Vishakapatnam, Madras, Bangalore, Nagpur, Bombay, Gauhati, Dibrugarh, Siliguri, Dacca :— 15, Ganesh Chandra Avenue, Calcutta.

Line 2 (Formerly Bharat Airways)

Calcutta, Patna, Banaras, Lucknow, Delhi, Agartala, Gauhati, Silchar, Imphal, Tezpur, Jorhat, Mohanbari, Chittagong, Bangkok, Singapur, Djakarta ; Nizam's Palace, Lower Circular Road, Calcutta.

Line 3 (Formerly Himalayan Aviation & Kalinga Airways)

Bombay, Karachi, Zahidan, Kandahar, Kabul ;—9A, Esplanade East, Calcutta.

Line 4 (Formerly Indian National Airways)

Delhi, Calcutta, Jaipur, Jodhpur, Karachi, Rangoon, Lahore, Amritsar, Jammu, Srinagar, Patna, Katmandu ;—Melhotra Building, Queensway New Delhi.

Line 5 (Formerly Deccan Airways), Hyderabad.

Line 6 (Formerly Air India Ltd.).

Line 7 (Formerly Air Services of India), Bombay.

INDIAN AIRLINE OPERATIONS—INTERNAL & EXTERNAL

Monthly averages or Calendar months

	Hours flown	*Miles flown*	*Capacity ton miles* (000)	*No. of passengers*	*Passenger miles*	*Weight carried* (000 lbs.)
1948	6,580	1,054	2,193	29,070	15,056	719
1949	7,829	1,258	3,049	30,492	16,293	1,545
1950	9,785	1,575	4,354	38,568	20,002	6,257
1951	9,888	1,623	4,777	38,401	22,055	6,978
1952	9,958	1,630	4,728	37,262	20,906	6,832

	Freight ton miles	*Mails-carried* 000 lbs.	*Mails carried* (tons miles 000)	*News-papers* (000 lbs.)	*News paper* (ton miles 000)	*Total load* ton miles (000)
1948	186	232	55	318	61	1,652
1949	311	413	150	334	76	1,989
1950	852	696	200	476	92	2,937
1951	1,058	599	232	369	79	3,327
1952	1,006	698	267	399	85	3,214

MEMBERS OF THE CORPORATIONS

Indian Airlines Corporation
B. C. Mukerjee, I.C.S., *Chairman*
Members
J. R. D. Tata
M. L. Khaitan.
Michael John.
B. N. Jha, I.C.S.
K. R. K. Menon.
L. C. Jain, I.C.S.

Air India Internatinal Corporation.
J. R. D. Tata, *Chairman.*
Members
B. C. Mukerjee, I.C.S.
K. C. Mohindra.
Michael John.
K. C. Bakhle.
B. N. Jha, I.C.S.
K. R. K. Menon.
L. C. Jain, I.C.S.

Resident Representatives.

The lines serially numbered and names of resident representatives in charge of them with their headquarters are detailed below—

1. Corresponding to Airways India Ltd.—K. K. Roy, Calcutta.
2. Corresponding to Bharat Airways Ltd.—C. J. Lalkaka, Cal.
3. Corresponding to Himalayan Aviation & Kalinga Airlines Ltd.—P. K. Ghosh, Calcutta.
4. Corresponding to Indian National Airways—J. M. Gupta, Delhi.
5. Corresponding to Deccan Airways—P. M. Reddy, Hyderabad.
6. Corresponding to Air India Ltd.—B. K. N. Rao, Madras.
7. Corresponding to Air Services of India Ltd.—Wing-Commander W. H. Burbury, Bombay.

Regional Representatives.

To ensure supervision of the operations of various lines the following gentlemen have been appointed Corporation's Regional Representatives—

(1) K. K. Roy—for Calcutta—Delhi, will have overall responsibility for lines Nos. 1 to 4.

(2) P. M. Reddy—for Bombay—Hyderabad, will have overall responsibility for lines Nos. 5 to 7.

INDIAN EXTERNAL SERVICES

Air India International—Delhi-Bombay/Calcutta-Bombay-Cairo-Rome-Geneva-Paris-London.

London-Duseldorf-Rome-Cairo-Bombay.

Bombay-Cairo-Rome-Dusseldorf-London.

London-Geneva-Rome-Cairo-Bombay/Cal.-Bombay-Delhi.

Karachi-Aden-Nairobi.

Nairobi-Aden-Karachi-Bombay.

FOREIGN SERVICES

B. O. A. C.—London-Sydney via Calcutta ; London-Singapore via Bombay ; London-Singapore via Delhi and Calcutta ; London-Singapore via Calcutta on alternate services ; London-Singapore via Delhi and Calcutta ; London-Colombo via Bombay ; London-Tokio via Delhi and Calcutta ; London-Tokio via Calcutta.

Qantas Empire Airways—London-Sydney via Calcutta ; London-Sydney via Bombay.

Orient Airways—Karachi-Delhi-Calcutta & Dacca ; Rawalpindi-Dacca via Delhi ; Allahabad and Calcutta.

K. L. M. (Royal Dutch Airlines)—Amsterdam-Jakarta via Calcutta.

Pan-American World Airways—New-York San-Francisco via Delhi and Calcutta.

Trans-World Airlines—Bombay.

Air France—Paris-Saigon via Calcutta.

Air Ceylon—Colombo-London via Bombay ; Colombo-Jaffna-Madras ; Jaffna-Trichinopoly.

Brathen's—Oslo-Hongkong via Bombay and Calcutta.

Iranian Airways—Bombay.

Philippine Air Lines—Manila-London via Calcutta.

Scandinavian Airlines System—Stockholm-Tokio via Calcutta.

SOME IMPORTANT DATES

1911—First Official Air Mail on 18th February, 1911 flown from U.P. Exhibition grounds, Allahabad to Naini Junction by M. Picquet, a French aviator.

1911—First passenger in an aeroplane in India was Sir Sefton Branker.

1912—Jules Tyck and Baron de Carters gave India her first public flying demonstration at Calcutta (Christmas Eve).

1918—First fight from Egypt to India by Capt. Ross Smith.
1919—First Eng.-India flight by Sqdrn.-Leader McLaren & Lt. Haley.
1920—First Air-mail service was organised by Govt. of India & operated by R.A.F. between Karachi and Bombay.
1927—Imperial Airways sent first air-liner to India, January, 8.
1927—Civil Aviation Department formed in India.
1928—First Flying Club in India.
1929—First regular air-mail introduced between England and India.
1930—First India-trained pilot with 'B' License was Bhagat Lal.
1949—First class internal mails by air without a surcharge was introduced on April, 1949.
1953—Indian Airlines nationalised on 1st August.

INDIAN POSTS AND TELEGRAPHS

Early History—The first British postal system was introduced in 1766 by Lord Clive but this was used mainly for official purposes. During the administration of Warren Hastings, the posts were made available to the public for the first time and a regular organisation was set up in 1774 by Lord Dalhousie who created an Imperial System of post offices. He reduced the rates for carriages of letters and introduced postage stamps. Act 17 of 1837 is the earliest enactment establishing a public service in India. The Act 17 of 1854 is a landmark in the history of postal system in India, for the entire department was placed under Director General and uniform rates were fixed for all India. The first issue of postal stamps was made in India in Sind in 1825. They were of three kinds—(*a*) design embossed on white paper without colour (b) blue-embossed on white paper (*c*) design embossed on vermillion wafers. The basis of authority of the existing postal system in India was Act 6 of 1898.

The honour of laying the first experimental telegraph line from Calcutta to Diamond Harbour in 1839 goes to Dr. William B. O' Shanghnessy, professor of chemistry, Calcutta Medical College. It was then the longest telegraph line in the world—21 miles with a 7,000 feet river crossing.

But it was not 12 years later in October 1851, to be precise, that the first official telegraph line was opened for traffic between Calcutta and Diamond Harbour. The construction of long distance overhead telegraph line began in Nov. 1853 between Calcutta and Agra. The first telegraph message was sent over the circuit on March 24, 1854. Later on, this line was extended to Bombay on one side and to Peshawar on the other. Telegraph circuits were gradually extended to all parts of India, till they reached 14,900 miles of wire in March 1867. To-day the total mileage of overhead wires is about 8,00,000.

The Postal System—The control of the Posts & Telegraphs of India is vested with the Director-General of Posts and Telegraphs whose office is attached to the Ministry of Communications of the Government of India. For financial and budget matters, there is a Joint Secretary, Ministry of Finance (Communications). The superior staff of the Directorate in addition to the Director-General, himself, consists on the postal side of one Senior Deputy Director-General, 3 Directors, 4 Assistant Directors-General and 4 Assistant Deputy Directors-General. The whole country is divided into 11 posts and telegraphs circles and 4 telephone districts. In addition, four administrative units on a functional basis have also been set up. Regional advisory committees have been set up in each posts and telegraph circle and each telephone district.

The audit and accounts of the Post Office is entrusted to the Accountant-General, Posts and Telegraphs who is an officer of the Indian Audit Department and is not subordinate to the Director-General. The Accountant-General is assisted by Deputy Accountant General.

Progress of Postal System—Next to Railways, the Posts and Telegraphs Department is the largest civil undertaking in India. The programme of providing every village with a population of 2,000 and above with a post office was put into effect immediately after independence and has been successfully completed in 1953.

Introduction of *All-Up Air Mail Scheme* in 1949 constituted a land mark in the history of mail communications in this country. All letters, post cards, money orders and insured letters are carried by air, wherever air transport is available and is advantageous. The introduction of night air services connecting the principal cities of India facilitated the introduction of All-Up Mail Service resulting in the abolition of the surcharge on mails for air conveyance. Over 27 p.c. of the entire inland mail receives air transmission.

Night mobile post office was first started as an experimental measure in Nagpur. Later, the scheme was extended to Madras and Delhi and Kanpur. The mobile post office visits important centres of the city at specified hours after ordinary post office have closed for the day. They will soon be opened in Bombay, Ahmedabad, Poona, Hyderabad, Calcutta and Bangalore.

Telegraph Service—The telegraph service in India celebrated its centenary in October 1953. At present there are 8,362 telegraph offices in India. The policy of opening telegraph offices in every town with a population of over 5,000 and in every sub-divisional headquarters irrespective of its size, is being implemented. There were 8,362 telegraph offices on December 31, 1952. The Hindi telegraph Service is being popularized. At present telegrams in any language written in Devanagri script are accept in 122 places.

Indian Telegraph is the oldest government-owned public utility in the world and it is the second largest employer in India (225,000 workers). Indian telegraph has 400,000 miles of wire and 26,000 miles of cable. 8,300 telegraph offices deal with 30 million messages a year.

Telephones—Licenses were granted to a private company known as Oriental Telephone Co., for the establishment of exchanges at Calcutta, Bombay, Karachi, Madras and Rangoon. All these lines, however, was taken up by the Government in 1942. The first automatic telephone was installed in India at Simla with 700 lines in 1913.

At the time of partition in 1947 there were only 278 telephone exchanges and 114,922 telephones, the numbers on December 31, 1952 were 604 exchanges and 199,934 telephones respectively. To facilitate telephone expansion "own your telephone scheme" was introduced in 1949. The number of trunk calls which used to be 4·4 million per annum at the time of independence, is now 11 million. Altogether 85,000 new telephones have been installed since partition. In India, now 4,500 telephone exchanges run 200,000 telephones and handle 11 million trunk calls per year.

Government Telephone Factory at Bangalore set up in 1948 was converted into a private limited company in 1952. This is the only factory in India for the manufacture of automatic telephones and carrier equipment. The factory started with the assembly of telephones from imported parts in 1948 and has since switched on to the manufacture of components of telephones. Now, all the components of a telephone except dials and condensers are being manufactured in this country.

In most places *message-rate system* of charges has been introduced. Under this system, a subscriber, besides paying a fixed monthly rental for the telephone, also pays for every call that he makes. The message rate system is at present in force in 12 places, *viz.*, Ahmedabad, Amritsar, Bombay, Calcutta, Delhi, Indore, Kanpur, Madras, Nagpur, Poona, Simla and Trivandrum. There is also *Messenger Service* for incoming calls at public call offices.

External Communications—Steady progress has been maintained since the nationalisation of Overseas Communications Service on January 1, 1947. The Service is responsible for the working of Telegraph, Telephone and Radio-photo services between India and foreign countries. Prior to nationalisation there were only four direct radio services, viz., to London, Australia, China and New York and now there are direct services to Afganistan, Japan, Indonesia, Thailand, Russia, Egypt and Iran. Communication with the rest of the world is still through London. There are already powerful stations at Bombay and Delhi. Madras is at present a cable station. A new wireless telegraph station has been set up at Calcutta and has started operating from the March 12, 1953 in order to handle telegraph messages between Calcutta and the U.K.

The following Services are operated at present by the *Overseas Communications Service* :—

Wireless Telegraph Service—Direct circuits exist (1) between Bombay and London, Melbourne, Shanghai, Tokio, New York, Kabul, Djakarta and Bangkok and (2) between New Delhi and London and New Delhi and Moscow.

Radio-telephone Service—Direct circuits operate between Bombay and Djakarta and Bombay and Cairo.

Photo-Telegram Service—This service is available between Bombay and London, Bombay and New York and *via* London to Europe. It has also been extended to Finland, Norway, Sweden and Belgium.

Submarine Cable Telegraph Service—It connects (1) Bombay and London *via* Aden, Port Sudan, Alexandria, etc., for the European traffic (2) Madras with Penang, Singapore Hongkong, etc., for Far Eastern traffic (3) Bombay with Zanzibar *via* Aden for East and South African traffic.

Some Postal Statistics—The Indian postal system covers 157,567 miles of route of these, 24 per cent are covered by rail, 17 per cent by motor and five per cent by miscellaneous means, such as steamers, mail-carts, bullock-carts, horses, mules and camels. The rest constituting 54 per cent of the total is covered by runners and small boats.

The total number of staff employed in the department is 1,94,755 of which 1,43,974 are permanent and 50,781 temporary. This includes 883 officers and 38,096 extra departmental agents.

POSTAL STATISTICS 1951-52

(*Articles, rupees etc., in millions*)

Postal articles handled	2,365·8	National Savings Certificates ..	1·7
Registered articles handled ..	85·6	Telegrams ..	29·2
Money orders issued ..	56·3	Telephone connections (Nos.) ..	184,506
Value of money orders	21·50	Trunk Calls (in millions)	8·9
Savings Bank transactions ..	12·99	Mileage of wires maintained ..	721,243

POSTAL TRAFFIC

(*Monthly averages of calendar months*)

	Regd. parcels (000)	*Inland telegrams* (000)	*Letters* (000)	*Post cards* (000)	*No. of telephones* (000)	*No. of trunk calls* (000)
1948	1,029	1,816	63,945	70,090	120	4,383
1949	1,077	1,737	70,338	77,263	..	..
1950	1,126	1,844	69,693	72,932	..	..
1951	1,186	1,877	..	..	168	..
1952	1,310	1,995	..	..	184	..

TOTAL POSTAL REVENUE

(*Monthly averages or calendar months*)
In thousands of Rupees

1948 ..	2,40,19	1951 ..	3,26,33
1949 ..	2,66,49	1952 ..	3,37,70
1950 ..	2,79,49		

POSTAL LANDMARKS

1825—First Indian postage stamp issued at Karachi for Sind only.

1930—First overland post between England and India established when steamer *'Hugh Lindsay'* made the first voyage from Bombay to Suez.

1840—P. & O. obtained charter for conveyance of mails between London to Suez for *en route* to India.
1851—First Govt. Telegraph line opened between Calcutta and Diamond Harbour.
1854—First stamp (half anna) printed in Calcutta.
1865—First telegraph line opened between England and India, 27 Jan. 1865.
1870—G. P. O. Calcutta was opened and occupies the site of the old fort.
1871—Value-payable system was established.
1880—Money-order system introduced.
1885—Postal Savings Bank started.
1911—First official Air Mail flight on 18th February, when 6,500 letters were flown from Allahabad Naini Junction.
1929—First Air-Mail from England landed at Karachi on 6th April, 1929.
1931—New Delhi Commemoration Stamp issued.
1935—Silver Jubilee of King George V Commemoration Stamp issued.
1937—King George VI Stamp first issued contained pictures showing various aspects of carrying mails in the country.
1942—Airgraph Service started (February 2, 1942).
1943—Photo Telegram Service introduced (3rd June, 1943).
1946—Two Pice Post Card reintroduced from 1st July.
1947—Indian Union issues three Jai Hind stamps commemorating Indian Independence, depicting the Asoka capital, India's National Flag and an Aircraft in fight.
1947—Government purchased from January 1, 1947, Overseas Telecommunications Service from India Radio & Cable Communication Ltd.
1948—Commemoration stamp issued on the occasion of the first flight of India's first external air service from Bombay to London.
1948—A stamp exhibition organised by the Postal Department was opened for the first time at Delhi on March 1948.
1948—Gandhi Memorial Stamps in four values issued on the 1st anniversary of India's Independence Day, 15th August, 1948.
1949—Telegraph transmission in Hindi in Devnagri script was introduced, June, 1949.
1949—Regular night air mail services between Calcutta, Bombay, Madras, Delhi and Nagpur were started on 31st Jan. 1949.
1949—On the Independence Day (15th August) stamps containing illustrations of historical monuments of ancient India, such as Ajanta, Trimurti, Konark Horse, Sanchi, Stupa, Kandarya Mahadeva Temple and Bhubaneswara were issued.
1950—New Independence Stamp issued on 26th January in commemoration of India's New Constitution coming into operation.
1932—On the occasion of Gandhi Jayanti on 2nd October, a new series of postage stamps bearing the portraits of some of the famous saints and poets of India were issued.
1953—Everest commemoration stamp issued on the 2nd October, 1953.

AGRICULTURE IN INDIA

Importance of Agriculture in India—Agriculture always plays an important part in the economic life of India. It provides livelihood to 70 per cent of the people and accounts for nearly 48 per cent of the national income. It provides the bulk of India's export. Some of the biggest industries, such as sugar and textiles depend on agriculture for raw materials.

The world position of Indian agriculture is indeed a big one. India enjoys a virtual monopoly in lac and leads the world in the production of groundnut and tea. It is second largest producer of rice, jute, tobacco and cotton. Among commercial fibre crops, India is only second to the U.S.A. in cotton and to Pakistan in jute. Although it is no small matter to hold such a position, neither is it strange that no less than three-fourths of the population of the country being either directly engaged in it or dependent upon it.

Defects of Indian Agriculture and Shortage of Food—Indeed the defects of Indian agriculture become evident when the per acre yield of most crops in India is compared to that of foreign countries. Indias' average yield of wheat per acre is about a third of the corresponding figure in Egypt and Japan. The yield of rice per acre is about a third of the Egypt, China and Japan. Egypt and U.S.A. grow six and three times as such cotton as India on an acre of land. This bespeaks the backwardness of Indian agriculture which by the way is due no less to the growing lack of soil fertility as to the medieval technique of agriculture and an almost complete lack of capital to be employed in it. It may also be said that the production of food was outstripped by the growth of population. The partition of the country in 1947 and the consequent separation from India of the canal irrigated areas of Sind and the Punjab and the lowlands of East Bengal not only aggravated the food shortage but also created an acute deficiency in jute and long and medium staple cotton. Indian agriculture has to contend with a notoriously capricious nature. Draughts alternating with devastating floods are a common occurrence in one part of the country or another. More over agriculture in India suffers from the impoverishment of soil and the fragmentation of holdings.

Average yield per acre—The average yield per acre of agricultural products India is comparatively poor. Average production of wheat per acre in India is about 700 lbs. while it is 1,918 lbs. in Egypt, 1,713 lbs. in Japan, 898 lbs. in China. As regards rice, production of India is about 750 lbs. per acre, while it is 3,444 lbs. per acre in Japan, 2,998 lbs. per acre in Egypt, 2,433 lbs. per acre in China and 2,185 lbs. per acre in U.S.A.

Area and Soil.—The total area sown annually is about 266 million acres, of which only 36 million acres or 13 per cent are sown more than once. Further the existence of about 11·6 million acres of culturable land and 58 million acres of current fallows points to the scope of more extensive and intensive cultivation.

Four main types of soil are (1) *alluvial*, (2) *black*, (3) *red* and (4) *laterite*. The first three are rich in potash and lime, but deficient in phosphoric acid, nitrogen and humus. The laterite soil possesses plenty of humus, but lacks most of the other chemical ingredients. The alluvial soil is the most fertile and easily worked and covers almost the entire Indo-Gangetic plain and a narrow strip of the coast girdling peninsular India. Highly retentive of moisture and sticky, the black soil covers the western portion of the Deccan plateau, while the red soil covers the eastern part. The laterite soil is found in Central India, Assam and along the Eastern and Western Ghats.

Research and Extension—The Central Department of Agriculture with allied departments in the Provinces was established in 1894 on the recommendation of the Famine Commission of 1880. Earlier in 1889, Dr. Voelker was deputed by the Secretary of State for India to advise the Government on the applicability of modern science to agriculture in India. His report in 1891 became the basis of the Government's policy on agriculture. The establishment of the Imperial Agricultural Research Institute at Pusa and All India Board of Agriculture in 1905 was another landmark in the progress of agricultural research. The Indian Council of Agricultural Research was created in 1929 on the recommendation of the Royal Commission on Agriculture.

The Council's Advisory Board consists of experts representing the states, the universities and scientific bodies, while its governing body is composed of the State Ministers of agriculture and the representatives of Parliament and commercial interests. The governing body is assisted by a Board of Research and a Board of Extension. The Council coordinates research work at different centres in the country, suggests programmes of reseach, gives financial assistance for approved schemes and undertakes other schemes of its own. The Council was completely reorganised in 1951 to enable it to discharge its responsibilities more effectively, specially in the field of extension work. Steps were taken to set up an extension service on a national basis to bridge the gulf between research workers and farmers. Central Committees for important commodities like cotton, jute, sugar-cane, oilseeds, tobacco, coconut and arecanut have also been established in order to promote the improved production and marketing of these commodities.

The research and extension schemes of the Food and Agriculture Ministry are operated through the Indian Council of Agricultural Research, the Central Research Institutes and the Commodity Committees.

Besides co-ordinating and guiding research, the Ministry of Food and Agriculture maintains a number of research institutes. *Indian Agricultural Research Institute at Delhi* conducts research in basic problems of all India importance, such as soil fertility, and improved varieties of seed which can resist draught, disease, insect pests and adapt themselves to different types of soil and climate. *Central Research Institute at Cuttack* provides field trials and research on the agronomy, mycology, entomology, botany and chemistry of rice. The multiplication of improved varieties of rice and experiments in green manuring and new methods of transplantation are some of its other functions. *Central Potato Institute at Poona* is engaged in evolving improved varieties of potato capable of giving high yields. *The Central Vegetable Breeding Station at Kulu* is experimenting on the adaptation of European vegetables for Indian conditions. *Indian Institute of Sugar Technology* at Kanpur was established in 1936 and is now maintained by the Indian Central Sugar-cane Committee. It conducts research in different branches of sugar technology, renders technical assistance to factories and trains students. The foundation stone of the *Indian Institute of Sugar Technology and Sugar-cane Research at Lucknow* was laid in 1953. *Forest Research Institute at Dehra Dun* was opened in 1914 and is engaged in research on silviculture, forest botany, entomology, the seasoning, preservation and the technology of wood, timber mechanics, cellulose and paper pulp chemistry and minor forest products and statistics. The Institute also provides training for forest officers. *Indian Veterinary Research Institute at Izatnagar* was established in 1890 with six main research divisions and four auxilary sections. In addition to research, the Institute undertakes the manufacture of vaccines and trains students. *Indian Diary Research Institute at Bangalore* trains students for diploma course in dairying and conducts research on dairy problems. There are two cattle farms at Karnal and Coimbatore and a creamery at Anand. Among the other important research stations are the *Indian Lac Research Institute at Ranchi, three fisheries research stations at Barrackpur Mandapam and Bombay, Indian Central Committees for cloth, tobacco, oilseeds, sugarcane, coconut and arecanut* operate and subsidise a number of research schemes at various stations and sub-stations.

Rainfall and Irrigation—Of the total area under cultivation only 19 per cent is irrigated by major and minor works, the rest being dependent on rainfall. A complete or partial failure of the monsoon results in famine conditions in some parts of the country.

There is large disparity between the yields of crops on irrigated and unirrigated lands. The extension of irrigation is expected to increase production between two to four times.

Land Revenue and Tenure—There are three main systems of land tenure in India. Under the *Zemindari* or landlord tenure, one or more persons jointly own a large estate and are responsible for payment of land revenue. The system prevails largely in West Bengal, Bihar and parts of Assam, Orissa, Madras and Uttar Pradesh. Under the *Mahalwari* or joint village tenure, estates are held by cosharing bodies or village communities, the members being jointly and severally liable for the payment of land revenue as in Madhya Pradesh, Punjab and parts of Uttar Pradesh. According to *ryotwari* or peasant proprietory tenture, the individual owners are severally responsible for the payment of the land revenue as in Bombay and Madras.

The existence of intermediaries between the State and the tillers of the soil retarded the development of agriculture. The State

Governments have therefore decided to abolish the zemindari rights. Legislation for the abolition of the rights of the zemindars and other intermediaries in the land has been enacted in all Part A States (except West Bengal) and Hyderabad, Jammu and Kashmir, Madhya Bharat, Rajasthan, Pepsu and Saurashtra and is under consideration in a number of States.

Under the British rule, land revenue was fixed on a permanent basis mostly in West Bengal, Bihar and parts of Assam, Madras, Orissa and Uttar Pradesh. Permanent system will now terminate with abolition of zemindari. Temporary settlements which are subject to periodic revision generally obtain in the rest of the country. The basis of land revenue, however differs from State to State.

Ownership & Holdings—Of the 294 million persons which the 1951 census estimates as depending for their livelihood on agriculture, roughly 167 million consist of those who own (wholly or mainly) and cultivate land and their dependents. About 31½ million belongs to the category of cultivators of land not owned by them and their dependents. About 45 million consist of cultivating labourers and their dependents and about 5⅓ million are non-cultivating owners, rent receivers and their dependents.

Average holding in India is about 5 acres though the size varies from State to State. According to the Report of the Famine Enquiry Commission, it was 11·7 acres in Bombay, 10 in Punjab, 6 in U.P., 4·5 Bengal, 4·4 acres in Madras. A large number of holdings is substantially smaller than average size. A greater evil is the sub-division or the fragmentation of holdings. It is the biggest single obstacle to economic cultivation, leading to increased overhead costs and to the under-employment of human, cattle and material resources.

Both voluntary method and compulsory method for the consolidation of holdings have been tried since 1912 to check sub-division and fragmentation. Punjab has led the way in voluntary consolidation. Legislation involving varying degress of compulsion have therefore been enacted and revised from time to time in the States. Efforts have also been made to organise co-operative farming. The trend of legislation and land policy in recent years has been to prevent the growth of small and uneconomic holdings and concentration of land in a few hands.

Marketing—The office of the Agricultural Marketing Adviser (now Directorate of Marketing and Inspection) was created by the Government of India in 1935. It has conducted nation-wise marketing surveys for various commodities. With the help of subsidies from Indian Council of Agricultural Research, the State Governments have established similar organisations in their own areas. In Bombay, Madras, West Bengal, Bihar, Punjab, Hyderabad and Mysore, these organisations have become permanently a part of their administration. The Agricultural Produce (Grading and Marketing) Act was passed in 1937. The commodities included in its scope are fruits, vegetables, eggs, dairy products, tobacco, coffee, hides and skins, fruit products, atta, oilseeds, vegetable oils, cotton, rice, lac, wheat, sann hemp, gur, myrobalans, wool and goat hair. Wood, bristles, rosin, turpentine and arecanuts have recently been added to the list. The principle of compulsory grading of agricultural produce for the purpose of export has been accepted by the Planning Commission.

Agricultural Policy and Development—Before 1943 there was no concerted attempt by the State to improve Indian agriculture. Grow More Food Campaign and the procurement drive launched about a decade ago constituted the first attempt towards development in Indian agriculture. Then began the Integrated Production Plan, the extension of research, the introduction of land reforms and the projected organisation of the Land Army. The Grow More Food Campaign was started in 1943 to increase production. The central assistance is now given for specific programmes, such as works schemes and supply schemes. The former includes the construction and repairs of wells, tanks, small dams, channels and tubewells and installation of water-lifting appliances, such as pumps etc. Supply Schemes cover the distribution of fertilizers and manures and improved seeds.

Integrated Production Programme—was formulated in 1950-51 for the achievement of self-sufficiency in food, cotton, jute, etc. It has become a part of the First Five Year Plan which has, in tern been integrated into the ten-year programme of Land Transformation. The five main programmes are (*a*) concentration of the available funds and technical facilities in 48 million acres with an assured water supply (*b*) reclamation and cultivation of 10 million acres of waste and fallow lands (*c*) organisation of *Bhumi Sena* (*d*) *gosambardhan* drive for producing 80,000 stud bulls a year and for the eradication of rinder-pest in the country and (*e*) regular observance of *Vana Mahotsava* with the object of planting 300 million trees.

Zoological and Botanical Surveys—The Ministry of Agriculture is responsible for *Zoological Survey of India* which is mainly concerned with care, preservation and maintenance of natural zoological collections in its custody. *The Botanical Survey* of India at Calcutta is also under the Ministry of Agriculture.

Central Tractor Organisation—was founded in 1947 with about 200 tractors abandoned by U. S. Army. Since its inception it has carried out some of the largest reclamation operations in Asia. Concentrating mainly on the reclamation of land infested with *Kans*, a deep-rooted weed, it undertakes tree-felling and jungle clearance also. A fleet of 240 new tractors were purchased in 1951 out of a loan obtained by the Government from the International Bank of Reconstruction and Development.

Crops—The two outstanding features of agricultural production in India are the wide variety of crops and the preponderance of food over non-food crops. There is hardly a crop of the tropical, subtropical or temperate zone which is not grown in some part or the other of this country. Food crops occupy about 85 per cent of the total sown area. There are two well-defined seasons: (1) *kharif* and (ii) *rabi*. The rabi crop is harvested in March-April and kharif crop in October-November. The major kharif crops include rice, jowar, bajra, maize, cotton, sugar-cane, sesamum and groundnut; the major *rabi* crops are wheat, barley, gram, linseed, rape and mustard.

Classification of Crops of India—The crops of India are usually classified as follows :—(1) *Food crops* such as rice, wheat, barley, millets, pulses and gram, sugarcane and spices, (2) *Oilseeds* such as linseed, rape and mustard, sesamum, castor, groundnut and cocoanut; (3) *Fibres* such as cotton, jute, hemp and flax; and (4) *Drugs and Beverages*, such as poppy, cinchona, tobacco, tea and coffee.

FOOD CROPS

Rice—the staple food of the majority of the people, is the leading crop of India and occupies about 30 per cent of the total cultivated area. As sufficiently high temperature, high rainfall and fertile alluvial plains are necessary for the growth of the crop, the southern and north-eastern parts of India are the main regions of rice growing. In order of merit, Madras, Bihar, West Bengal, the U.P., M.P., Orissa, Assam and Bombay are the main rice growing areas. Although it is generally regarded as a winter crop to be harvested in December and January, rice is special crop in the monsoon tracts. Two other varieties of comparatively small importance are the autumn rice harvested in September and the summer rice harvested in May and June.

Wheat—which is the staple food of central and north-western India is a *rabi* (spring) crop sown in India from October to December and harvested from March to May and stands next only to rice in importance. The U.P., and Punjab form the principal wheat growing area. The two main species of what grown in India are the so-called 'bread' wheat of Europe and the so-called 'marconi' wheat and it is estimated that about a third of the total acreage of wheat in India is under improved varieties.

Barley—a subsidiary food to wheat-eaters is a *rabi* crop and is grown mainly in the U.P., and Bihar. Compared to her pre-war acreage and yield of about 6 million acres and about 1·9 million tons, India has now about 7 million acres under barley producing about 2·4 million tons.

Millets—*viz., jowar* (called cholam in Madras) and *bajra*, the two main varieties grown in India constitute the staple food of the agricultural population of the south. As noticed above both of them are mainly grown as kharif crops. While jowar is mainly grown in Bombay, Hyderabad, M.P., Madras, the U.P., bajra is grown mainly in the Rajasthan, Bombay, the U.P., Madras and Punjab in order of importance. It is estimated that jowar is grown in about 20 million acres yielding about 4 million tons while bajra is grown in about 16 million acres yielding more than 2 million tons. Another such foodcrop, grown mainly in the south is *ragi* which accounts for about 5 million acres producing about 1·4 million tons annually. Another food crop, uncommonly rich in its food value, is *maize* (commonly known as makai or bhutta). Although grown more or less all over India, it is grown mainly in the U.P. and Bihar.

Gram and the Pulses—These constitute an important and balancing item of the popular diet in this country. Often grown mixed with other cereals, the pulses help to restore the fertility of the soil when grown as rotation crops. *Gram* the most commonly grown pulse of India, is a rabi crop and accounts more or less for about 17 million acres and 3·5 million tons. The U.P., Punjab, Bihar, M.P., and Hyderabad are in order of merit the most important gram producing areas. Khesari, mung, masur, arhar, mattar and kalai are the other pulses, also grown extensively thoroughout the country.

Sugarcane—Sugarcane occupies a principal position in the rotation of crops in large tracts in both North and South India. The value of by-products of sugarcane adds greatly to its importance. The leaves and tops of sugarcane serve as fodder for cattle. Molasses are important raw material for the chemical industry and for manufacture of power alcohol in particular. Bagasse is used in the manufacture of paper and paper board. Though a kharif crop, it is grown mainly in the northern States of India, the U.P., Bihar and Punjab being the leading producers. In recent years, the acreage under sugarcane in India has fluctuated around 3·6 million acres yielding in terms of raw sugar (gur) about 5 million tons. But the per acre yield is so low that with about 28 per cent of the world acreage under sugarcane India accounts for less than 5 per cent of the total annual yield of the world.

Spices—of numerous varieties are grown throughout India, some mainly in the south. Of the Indian spices *pepper* is confined to the submontane tracts of the Western Ghats and the total acreage is estimated to be over 20,000 acres producing about 31,000 tons in a normally good year. The major share of the pepper is produced by a large number of small holdings, *chillies* in West Bengal, Madras, *Ginger* in Bombay, Uttar Pradesh, West Bengal, Madras, *cardamom* in the forests of southern and western India, and *cinnamon* in the Western Ghats of South India. Among others *betelnuts* are grown mainly in West Bengal and South India, *arecanuts* being also grown in the same areas. India is however in short supply of many of the spices and has to import them.

Other Food Crops—Among *other food crops* mention must be made of the overall shortage of *fruits and vegetables* which keeps the first almost totally out of the reach of the general mass of people and due to which the later is an insufficient unit of popular food considering the dietary habits of the people. The present annual supply of fruits and vegetables amounts to only 1·5 and 1·3 ounces per adult per day against the diet at 3 ounces and 10 ounces respectively. To make the position clear it may be mentioned that in potato for example, India's production is so very low that the per capita consumption comes to about only 8 lbs. per annum as compared to 506 lbs. in Belgium.

PLANTATION CROPS

Plantation Crops—The great plantation areas of India are Assam in the north, the Nilgiri Hills and the West Coast area of Travancore-Cochin in the South.

Tobacco—India stands third in the production of tobacco, the other countries being U.S.A. and China. There are five zones of concentrated production in India—(*a*) *North Bengal area*, (*b*) *North Bihar area*, growing both Nicotina Tobacum and Nicotina Rustica; the former used for chewing as well as manufacture of cigarettes and latter mostly used for hookah, (*c*) *Gujarat area* growing Nicotina Tobacum suited for bidi, hookah and snuff, (*d*) *Nepani areas* of Belgaum, Kolhapur and Miraj growing Nicotina Tobacum used for chewing and bidi; they are specially mild and sweet, (*e*) *Guntur area* growing virginia type tobacco which is excellent for cigarette manufacture. The chief virginia variety cultivated in Indian soil is Harrison special.

Poppy—which was an important narcotic crop before International Agreement led to the restriction of opium exports, is at present grown chiefly in U.P. and Central India and that mainly as a government monopoly.

Cinchona—is mainly grown on government plantations in the Nilgiri Hills and Darjeeling. Considering the overall need of the malaria-stricken country-side, production is still short and has to be supplemented by imports.

Tea—Indian Union is overwhelmingly the largest producer in the world. The yearly production is nearly 600 million lbs. About 82 per cent of India's tea comes from North India, mainly from Assam and the Dooars (West Bengal) ; this tea is exported through the port of Calcutta. Tea is, after jute and cotton, India's most important exchange earner.

Coffee—next to tea, coffee is considered the most important plantation crops in India. The Indian production though small, has consisted always of a large proportion of highest quality and is grown in about 224,000 acres yielding about 18,000 tons. India produces less than one per cent of the world coffee output. There are about 10,851 coffee plantations in India. With the exception of small areas in Orissa, Assam and Madhya Pradesh, Indian coffee is grown in the low hills of South India. Mysore is the most important growing area followed by Madras, Coorg and Travancore-Cochin.

Rubber—The cultivation of raw rubber on a plantation scale was undertaken in Travancore-Cochin, Malabar, Coorg and Mysore in early years of the present century. The production of rubber in the country at the present time is of the order of 16,000 to 17,000 tons. Of the total number of rubber estates and holdings, 72·85 p.c. are located in Travancore, 8·19 p.c. in Cochin, 16·55 p.c. in Madras (mainly Malabar) and remaining 2·41 p.c. are in Coorg, the Andamans and Assam.

Pepper—India is supplying two-thirds of the estimated world demand. She is now producing, in and below the Western Ghats between Karwar and Cape Comorin 31,000 tons of pepper grown over 195,000 acres.

Cardamons—In the recent years there has been a remarkable expansion in the cardamon growing industry. It is estimated that the present acreage amounts to over 120,000, about 50 per cent of which is situated in the Cardamom Hills in Travancore-Cochin and the remainder in the States of Coorg and Mysore and in the districts of Madura, Tinnevelly, Malabar and Coimbatore. The total production is estimated at about 1,350 tons.

Cloves—are chiefly grown in the foot-hills of the Western Ghats in the State of Madras. The production is insufficient to meet demand.

FIBRES

Cotton—the chief commercial crop of India, has fallen in acreage from about 21 million acres in the pre-war period to about 11 million acres at present, the yield coming down from about 4 million bales (of 400 lbs. each) to about 2·4 million bales against an internal requirement of about 4·2 million bales. Coming down thus from a surplus to a deficit country in respect of cotton, the partition of the country has left India with about 1·3 million bales only of long staple cotton against a requirement more or less of about 2 million bales for mill consumption. Although grown in most areas in India, Bombay, Saurashtra, the M.P. and Hyderabad supply the major amount of it.

Jute—heretobefore a monopoly of undivided India, is at present grown in about 766,000 acres yielding about 2 million bales against a total requirement of about 6 million bales. Endeavour is being made therefore to extend its cultivation from mainly West Bengal, Bihar, Orissa and Assam as at present to South Indian areas suitable by climate and soil for growing jute in them. Reclamation of fallow land, diversion of *aus* paddy land, double cropping of *aman* paddy land are some of the measures adopted to secure an increase in jute production and the result has been the progressive increase of jute production in India.

Hemp—is another fibre grown in India chiefly in the M.P., the U.P., Bombay and West Bengal. Small as the production is, it is used largely for the production of cordage and canvas.

Silk—Two-thirds of the total output of this fibre comes from Mysore. Of the other varieties of silk, "mulbery" silk is grown in the districts of Murshidabad, Malda and Birbhum of West Bengal, Dehra Dun and Parbatgarh of the U.P., Gurudaspur of East Punjab and in Kashmir, where it is a state monopoly; 'tasar' silk in the M.P. and the Chotanagpur division of Bihar; 'eri' silk in the Jalpaiguri district of West Bengal and in Assam; and 'muga' silk in Assam and Manipur.

OTHER CASH CROPS

Sugar—India is the largest producer of sugar in the world and second or third largest producer of sugarcane. The sugar industry's output is valued on the basis of present prices at over 120 crores per annum. Sugarcane growing is an important element in the agricultural economy, specially in Uttar Pradesh and Bihar. The average yield of cane per acre is now around 14 tons as compared with 56 tons in Java and 62 tons in Hawaii.

Lac—is a resinous material secreted by an insect which lives as a parasite on certain kinds of tropical tree. It can be marketed roughly in its natural form as sticklac or refined into seedlac or further refined into shellac or buttonlac. Lac is collected over almost all India, the most important producing states being Bihar and Madhya Pradesh.

Myrobalans—is a small fruit produced on trees in mixed deciduous forests normally below 3,000 feet above sea level, but occasionally found up to 5,000 feet. When pulped it produces a substances used in the tanning, industry. It is also used as a country medicine. The fruit is collected in state forests in Madhya Pradesh, Madras, Bombay, Bihar and Orissa and also derived from private forests.

Lemon grass oil—Nearly 80 per cent of the world's supply of lemon grass oil is produced in the State of Travancore-Cochin where the area under cultivation is estimated at 35,000 acres.

Cashew Nuts—are grown mostly in Madras, Bombay, Orissa, Bengal and Travancore-Cochin. They are processed along the West Coast in the States of Madras and Travancore-Cochin.

OILSEEDS

Oil Seeds—The importance of oil seeds in the Indian economy is indicated by the fact that more than 25 million acres are devoted to their production, equivalent to about 10 per cent of the net area sown with crops in the whole of India. Indian Central Oilseeds Committee Act which was passed in 1946 was intended to promote the improvement and development in the cultivation and marketing of oil seeds and oil-seed products and in accordance with this Act the Indian Central Oilseeds Committee, on which are represented Central and State Governments, growers, crushers and exporters, was constituted in May, 1947. This Committee is responsible for the development of all oil seeds excepting cocoanut for which a separate Committee, *viz.*, Indian Central Coconut Committee at Ernakulam (Cochin) has been constituted under the Indian Central Coconut Committee Act 1944.

Linseed—a rabi crop, producing a very important industrial oil, is at present grown in about 3·3 million acres yielding more than 350,000 tons annually. Cultivation of linseed is widespread throughout India, main centres being Madhya Pradesh, Uttar Pradesh, Hyderabad, Bihar, Madhya Bharat, Rajasthan and Vindhya Pradesh.

Castor seed—another non-edible oilseed, is a virtual monopoly of India, the average acreage and yield in recent years being 1·4 million acres and about 130,000 tons. Hyderabad is the most important producer with an area of 879,000 acres. About 70 per cent of the crop is available for export either as seed or as oil.

Groundnut—The groundnut cultivation has become a major agricultural operation in India and the crop is now estimated to occupy nearly 42 p.c. of the area under all oilseeds and 4·4 p.c. of the total area sown under all main food crops in the Indian Union. From a mere 0·5 million acres at the beginning of the century, the groundnuts now account for nearly 11 m. acres with an annual yield of 3½ million tons of nuts in shells and 4·10 m. tons of kernels. Nearly 80 p.c. of the groundnut area is concentrated in Madras, Bombay and Hyderabad and the prominent varieties grown are the Coromandel and the Peanuts. Bold nuts grown in Saurashtra with a lower oil content are specially valued for eating.

The oil is used for culinary purposes either as such or in the form of the hydrogenated product known as vanaspati.

Rape and Mustard—two other very important edible oilseeds, are, unlike groundnut, rabi crops accounting for about 4·3 million acres and a little less than 800,000 tons in normal years. Uttar Pradesh grows well over half the rape and mustard in India. Other important producing areas are Bihar, Punjab, Assam and Rajasthan.

Sesamum—also an edible oilseed, is a kharif crop grown in a little less than 4 million acres with an yield of more than 340,000 tons in normal years. The chief growers of sesamum are the U.P., and Madras followed by Rajasthan, Hyderabad and Madhya Bharat.

Coconut—is an important oil-yielding tropical fruit. It provides many useful products to mankind. The karnel of the ripe nut in its raw state finds wide use in culinary preparations or is dried and converted into copra and crushed for oil. Coconut oil is greatly in demand for edible purposes as well as for the manufacture of soaps and toiled preparations. The tender nuts affords a refreshing drink, while the unopened spathe on tapping yields a sweet-juice or neera. Its leaf and timber are extensively used for constructing houses. In India it grows luxuriantly in the coastal and deltaic tracts and also in the interior of Mysore. India's share in the world acreage and production comes to 1·5 million acres and 3,400 million nuts respectively. The bulk of this produce comes from the plantations located in the strip of land lying on the west coast of India between the Arabian Sea and the Western Ghats extending from the Konkan in the north to Cape Comorin in the south and falling within the territories of North Kanara of Bombay State, South Kanara and Malabar districts of Madras and Travancore-Cochin. The districts of Tanjore, Godavari and Vizag in Madras, Andhra and Mysore. Orissa and Bengal also possess appreciable areas under the crop. To rehabilitate the industry and promote research on better or more efficient production and marketing of coconuts, a statutory body, the *Indian Central Coconut Committee* representing various interests was constituted by an Act of 1944.

Though India is the second largest producer of coconuts her production is for short of her requirements.

Cotton-seed—also an edible oilseed, is naturally a by-product of cotton cultivation and is extensively grown in India, the average annual production being above 2 million tons.

PRODUCTION OF FOODGRAINS IN INDIA

(*Thousands of tons*)

	1949-50	1950-51	1951-52		1949-50	1950-51	1951-52
Rice	23,170	20,295	20,767	Ragi	1,520	1,407	1,167
Wheat	6,290	6,374	5,768	Barley	2,215	2,341	2,136
Jawar	5,777	5,403	5,509				
Bajra	2,790	2,549	2,153	Small millets	2,242	1,716	1,805
Maize	2,014	1,702	1,959				
				Total Cereals	46,018	41,786	41,264
				Gram	3,667	3,593	3,157
				Grand Total	49,685	45,379	44,421

(*Report on Currency & Finance* 1952-53)

PRODUCTION OF INDUSTRIAL RAW MATERIALS AND OTHER AGRICULTURAL COMMODITIES

(In tons—000's omitted)

	1948-49	1949-50	1950-51	1951-52
Sugar (raw) tons ..	4,869	4,938	5,616	5,895
Oil Seeds (tons) ..	4,502	5,142	5,103	4,791
Cotton (lint) bales of 392 lb. each ..	1,767	2,628	2,971	3,134
Jute (bales of 400 lbs. each)	2,055	3,089	3,301	4,678
Tea (lbs.) ..	577,807	585,030	607,309	..
Coffee (tons) ..	16	22	25	..
Rubber (tons) ..	15	16	16	17
Lac (mds.) ..	806	1,161	1,003	1,197
Silk (lbs.) ..	2,232	2,104	2,127	..

(*Report on Currency & Finance* 1952-53)

AGRICULTURAL PRODUCTION

Estimated area and yield of principal crops harvested

A. Food & Bevarage

	Rice		*Wheat*		*Other cereals*	
	Area (000 acres)	Yield (000 tons)	Area (000 acres)	Yield (000 tons)	Area (000 acres)	Yield (000 tons)
1950	75,414	23,170	24,114	6,290	16,558	20,397
1951	75,975	20,295	24,134	6,374	15,117	18,709
1952	73,565	20,741	24,235	5,768	14,729	16,719
1953	74,674	23,424	..	..	..	..

	Grams		*Groundnut*		*Sugarcane*	
	Area (000 acres)	Yield (000 tons)	Area (000 acres)	Yield (000 tons)	Area (000 acres)	Area (000 tons)
1950	20,397	3,667	9,832	3,379	3,624	4,938
1951	18,709	3,593	11,130	3,437	4,214	5,616
1952	16,719	3,657	11,798	3,045	4,927	5,895
1953	..	..	11,862	2,894	..	..

B. Non-Food

	Cotton		*Jute*		*Other oil seeds*	
	Area (000 acres)	Yield (000 bales	Area (000 acres)	Yield (000 bales	Area (000 acres)	Yield (000 tons)
1950	16,213	2,628	1,454	3,301	15,053	1,763
1951	14,556	2,971	1,951	4,678	15,551	1,666
1952	12,173	3,134	1,834	4,695	16,159	1,754
1953	..	..	..	..	..	..

	Tobacco		*Rubber*	
	Area (000 acres)	Yield (000 tons)	Area (000 acres)	Yield (million lbs.)
1950	860	264	171	35
1951	902	263	171	38
1952	659	192	173	44
1953	768	211	..	..

(*Report on Currency & Finance 1952-53*)

FISHERY IN INDIA

India is remarkable for its abundant fish fauna which accounts for the large section of its population depending on fishes as the staple protein dish.

With a coastline of 3,500 miles, a continental shelf of more than 100,000 square miles, into which numerous large, perennial rivers discharge their silt-laden waters, innumerable gulfs, creeks, bays and oceanic islands, the marine fisheries resources of India must be quite considerable. Similarly, the extensive backwaters, estuaries, lagoons and swamps, numerous rivers, streams and channels and a very large number of perennial and semi-perennial lakes, beels, reservoirs, tanks, ponds and other stretches of water, a large proportion of which is culturable, are a rich potential of inland fisheries.

The number of adult fishermen in India is believed to be of the order of 500,000. The total number of boats, catamarans and other craft has been estimated at more than 70,000. Yet, the average catch per person per year probably does not exceed 2,500 pounds. In the U.S. trawler fisheries, the catch per man per year is more than 80,000 pounds and in the Californian sardine fishing operations as much as 200,000 pounds.

Development of our fisheries was fully realised as a result of the food shortage at the end of the World War II. The Government of India set up a small central organisation and took steps to develop fisheries in this country, such as financial and technical assistance under Grow More Food Campaign and also help to the States for implementing their approved schemes of fisheries development in the form of loans and subsidies. These schemes are of various kinds, such as survey and stocking of inland culturable waters to pilot scale fishing in offshore and deep sea water with modern power vessels. Second line of approach to improvement is the undertaking of research, pilot experiments and training etc. This means fundamental and lasting benefit to the development of fisheries. Two fisheries research stations have been established, one for marine at Mandapam in South India and the other, for inland fisheries at Barrackpore, near Calcutta. Each station is staffed by a band of highly qualified research workers.

Some of the States are also engaged in research work with the object of training fishery workers to meet the requirements of State Governments. The Government of India have been running two fishery training centres at their two fisheries research stations.

With the object of developing marine fisheries in India, for which a great deal of information regarding our fishing grounds, fishing seasons, suitability of different types of vessels and equipment for use under Indian conditions, the Central Government have established a pilot deep-sea fishing station at Bombay. In addition to charting fishing grounds off the Bombay coast, this establishment is bringing out considerable quantities of fish as a result of their operations.

Inland Fisheries—are the cheapest and quickest source of fish supply in any country. India today is perhaps more advanced than most of the countries of the world in inland pisciculture. Large areas of water in many States are being stocked at present, yielding 10 maunds or more per acre. In this stocking operation the most important point is the adequate supply of fish-seed. Apart from the fact that stocking has to be done afresh every time, sources of spawn and fry of carp have not yet been located in many States. In this fish spawn trade, Bengal occupies superior position. Other States coming next are Bihar, Orissa, U.P., Delhi and Punjab. Another easy way of fish producing is the stocking of brackish waters, like the extensive backwaters of Cochin where sluice gates are provided for inflow and outflow of water to bring young of certain fishes into stocking tanks with the tides.

Deep Sea Fishing—The large gap between production and requirements of the country can only be made up by the exploitation of our extensive marine resources. Fishing in Indian seas is, however, confined to a narrow coastal belt of five to seven miles only. This is largely because the equipment used for sea fishing consists mostly boats, canoes, catamarans and of small nets and tackles which are not of a type which can stand the rigorous and requirements of off-shore or deep-sea fishing. These fishing people, poor as they are, have acute problem of procuring nets, timber for boats, sailing cloth, fish hooks and coal tar etc. In addition to this difficulty, these fishing folks cannot go beyond the coastal belt—all their time is spent up in reaching the fishing ground and bringing their catch to the market. So the mechanization of fishing operation has become an absolute necessity.

To start deep sea fishing on a commercial scale, the first requisite is to collect essential data regarding fishing grounds, the type of crafts and gear that would be suitable, the species of fish that may be available in different parts of the sea, in different seasons and similar other essential information. Collection of such data which, at the outset, cannot yield economic returns commensurate with the expenditure involved, can only be undertaken at the Government level.

Refrigeration—Another important item for the improvement for fish production in India is the refrigeration without which this problem can not be solved. At present, though large quantities of fish are being caught, but for the want of refrigeration facilities and transport, only a small portion of the catch can be used in a fresh condition. So for the better supply of fishes, two things are absolutely necessary—(1) quick transport of fresh fish from large assembly centres to some of the towns in fast motor vans, (2) provision of refrigerated rail transport. For the quick freezing and cold storage, plants are the ideal solution for the proper preservation of fish and also erection of as many ice factories as possible, so that adequate quantities of ice may be available at all important fishing and consuming centres.

Fishing Curing—For the lack of adequate transport and other facilities, it is estimated that more than 50 per cent. of our fish production is being cured in various ways. A large quantity is consumed in this country but a lucrative export trade in this commodity with Ceylon and other countries has also been established. More that 150 fish curing yards have been established by governments along the coasts of India.

Varieties of Fishes—Seas around India are rich in variety of fishes. Plenty of sharks are available in the Bay of Bengal, Arabian Sea and also along Coromandel and Konkan coasts. Sardines, herrings, anchovies and shades form the bulk of our food fishes and rank first in commercial importance. Mackerel, horse-meckerel and perches come second. The other remaining marine fishes are jewfishes. Indian salmons, cat fishes, bombay ducks, pomfrets, mullets, silver bellies, ribbon-fishes etc., which are small sized groups.

Regarding fresh water fishes, carps form the most highly esteemed variety, such as, *Rohu*, *Calta*, *Mrigal* and *Calbasu* which are well-known throughout India. Other important varieties are cat fish, wallllago, bagarious, clarius, silundia and macrones belonging to this class. There are also miscellaneous fishes such as murrels etc. Trout has been introduced into the hill streams in Kashmir, Kumaon and Nilgiri Hills.

Regarding *river fishes*, the following may be specially mentioned—*masheer* available in the upper reaches of most rivers in India. *Chilwa* is a flat-sided, thin-bodied fish with his stomach running an an edge. It occurs freely both in the north as well as in south Indian rivers. *Murral* varies from 2 to 3 ft. in length. *Batchwa* is small but excellent for eating. *Barils* have 14 species and they are widely distributed throughout India. *Olive carp* is available in Madras and is also found in the fresh waters all along the coast of India from Kutch to Bengal. *Mulley* has no scales.

Regarding *tank fishing* we have *rohu* which is met within most large-sized tanks.

Fish Products—Besides articles of food, fish yields several by-products. The most important is fish oil, such as, sardine oil and shark-liver oil which are now being produced on commercial basis in India. The oil is used for the manufacture of paints, soft-soaps, for softening hides, for temparing steel etc. Fish liver oil produces vitamins A and B indispensable for wasting diseases. It is being manufactured by the Governments of Bombay, Madras and Travancore. Indian fishes such as Salmons, Jew fishes, Cat-fishes are yielding 'Isin-glass', a valuable article for the clarification of wines. Fish-scraps are converted into fish meal as additional protein food for poultry and livestock. Fish refuse is being dried as manure.

Fish-curing is also an important supplementary trade. The chief methods of curing fish in India are sun-drying and salt curing, either by dry or wet process.

Fish-Eating Population—Fish is eaten by nearly 50 per cent of the population. It is an important active food in Bengal, Bombay, Orissa and Madras, but owing to the very limited supplies not more than a '*chhatak*', of fish per head per week is available. The minimum needs of the fish-eating population is 2 'chhataks' at an average a day per person. It is estimated that *per capita* consumption of fish in India is only 3·4 lbs.

Production of Fish—India's anunal production of fish is 522,000 tons, 71 per cent of which come from the sea. There are 187 curing yards in the country. India exports Rs. 208 lakh worth of dry fish mainly to Ceylon, Burma and Malaya. A number of varieties of fresh fish are also exported to America though on a small scale. The fish which has evolved keen interest and liking by the Americans is Bombay Duck which are being sent to America by Indian exporters per year.

Fish Research—There are three fisheries research stations in India at present, namely, (1) Central Inland Fisheries Research Station at Barrackpore, (2) Central Marine Fisheries Research Station at Mandapam, South India and (3) Deep-Sea Fishing Station, Bombay, which are financed and maintained by the Government of India.

The new methods introduced for increasing fish production are (1) supply of fish fry and fingerlings by the Central Inland Fisheries Research Station, Barrackpore, to the deficit areas and (2) effecting reduction in the morality of fish fry and fingerlings and (3) trying out different kinds of modern methods of fishing in deep-sea waters.

Government Development Plan—Under the Government of India's plan, improved fishing vessels and new methods of catch are to be tried especially off Bombay and Madras coasts and in the Bay of Bengal. Besides, a large number of fishing boats in Madras, Bombay and Saurashtra would be fitted with Diesel engines to enable them to go farther into the sea. These engines will be fitted by the State Governments and sold on 'no profit' basis to private fishermen and co-operatives. The fishermen will be trained in the use of modern craft and equipment free of cost by the Governments of maritime States. Under the recent Indo-U. S. Technical Cooperation Agreement, the U. S. Government are to provide Rs. 1,18,36,065 and the Government of India Rs. 68,95,000 (total of Rs. 1,87,31,065) for the development of marine fisheries in India over the next five years. Under this scheme India will get 14 multi-purpose fishing boats of various designs, two tugs to tow smaller indigeneous fishing vessels, three Japanese bull trawlers with Japanese crew, etc. One Japanese trawler is already operating off Bombay and is training Indian crew.

The plan also envisages conversion of the two existing fishing trawlers maintained by the Government of India in Bombay for use as "bull trawlers".

PRODUCTION & CONSUMPTION OF FISH, 1948

1. *Production*	*In thousand mds.*
Sea fish	10,078·9
Fresh Water Fish	4,073·5
Total	14,152·4
Quantity available for consumption (000 *mds.*)	13,020·0
Population (1948—*millions*)	348·83

Per capita consumption (*lbs.*)	3·07
2. *Consumption*	
Consumed as fresh fish	6,027·5
Converted into sun-dried fish	3,674·0
Converted into salted fish	3,317·8
Converted into fish manure	1,133·1

ANIMAL HUSBANDARY IN INDIA

Importance of Cattle in India—Cattle plays an important part in the rural economy of India. In all agricultural operations, oxen are indispensible to Indian farmers. The value of hides, bones hoofs and horns is also of considerable economic importance. The contributions of cattle wealth to the economy of India is estimated to be Rs. 19,000 millions annually.

India is one of the largest livestock countries in the world, possessing about a fourth of the world's cattle *i.e.*, 75 per 100 acres of cultivable land and 60 per 100 persons of population. In addition, India has sheep, goats and other animals consisting of horses, mules, donkeys and camels, all of which play a vital part in the agricultural economy of the country. The distribution within India itself is hetergeneous in density and breeds vary from the best variety to the poorest.

Indian cattle serve two main purposes; one is the milk production and other is the supply of bullock power for agricultural operation like ploughing, carting, and drawing of water for irrigation. But Indian cattle is of inferior quality because there is indiscriminate breeding and a majority of them do not possess characteristics of any breed. The Agricultural Research Institute has undertaken to build up pedigree herds of Indian cattle. Moreover many young cows and young buffaloes are slaughtered when they go dry because of lucrative prices offered for them and for other economic reasons. The Agricultural Marketing Department has suggested that indiscriminate slaughter of such cattle should be prevented by legislation and that cattle salvage stations should be established in big towns throughout India to take in such cows and buffaloes when they have been rejected by city milkmen.

The most important cattle-rearing region is in the north-west. It is a belt of land extending from Kathiawar through Rajputana and the Punjab to Kashmir. The finest animal is bred in Gujerat. Other areas where cattle is reared are the Malwa plateau and the northern Madras. Sheep and goats are reared in largest numbers among the mountains of Kashmir and on the dry pastures of the Punjab and the Deccan Hills. Camels are also used in Rajasthan and other places as beasts of burden. Elephants are also used for work in Assam and Mysore. But the position of Indian cattle has not improved due to the following causes; (1) Refusal of orthodox Hindus to destroy old, diseased cows on religious grounds, (2) Lack of food, (3) Promiscuous breeding, (4) Want of grazing lands, (5) Unscientific method of rearing animals and (6) Want of cross-breeding.

Livestock & the Indian Constitution—organisation of agriculture and animal husbandry finds a place in the Constitution of India. For in Article 48 included in the "Directive Principles of State Policy" it is directed that State shall endeavour to organise agriculture and animal husbandry on modern and scientific lines and shall, in particular, take steps for preserving and improving breeds, and prohibiting the slaughter of cows and calves and other milch and draught cattle".

Key Village Project—The Five Year Plan has approved of the *Key Village Project* whose ultimate aim is to produce—and consume—more milk in India. Six hundred of these centres are to be scattered all over the country and these will assist in improving the breeds of cattle in the neighbouring areas by providing fine bulls or an artificial insemination service. Prophylactic steps will be taken to prevent cattle being carried away by fatal epidemics. The key villeges are expected to produce about sixty thousand pedigree bulls a year to help in improving the strains of cattle.

Division of Livestock—Livestock is generally divided into three classes, namely—(*a*) *Bovine*, comprising oxen and buffaloes; (*b*) *Ovine*, comprising sheep and goats; and (*c*) *others*, comprising horses, ponies, mules, donkeys, camels, and pigs.

Species of Cattle—In India certain breeds of cattle are known for their high milk productions, while others for their high class powers. A third category of animals combine in themselves a moderate degree of efficiency for production of both milk and work. The best milking varieties are—

(1) *Gir*—the home of the breed is Saurashtra. These are good milkers; (2) *Hariana*—the home of the breed is the area covered by the districts of Rohtak, Hissar, Gurgaon and parts of Karnal and Delhi. A dual purpose animal, value as a powerful work animal and at the same time capable of providing a fair amount of milk; (3) *Jafferbadi* buffaloes belong to Kathrawar (4) *Surti and Pandharpuri* buffaloes belong to Bombay State. (5) *Kanrej*—the home of the breed is particularly along the Beas and Saraswati rivers, in the Runn of Cutch, Ahmedabad district and Radhanpur State (*i.e.*, *Gujerat*). It is one of the heaviest of the Indian cattle. This is a famous milker; (6) *Murrah*—the home of this breed is Punjab. Murrah buffalos & cows are amongst the efficient milk and butter producers of India; (7) *Sahiwal*—this breed is mostly found in Ferozepur district and other border towns of East Punjab *e.g.*, Amritsar, (8) *Sindhi*—Sindhi cows are high milk yielders and the most economic milk producers. Substantial progress has been made to develop this breed in parts of Southern India, particularly in Travancore. It is distinctively a dairy animal; (9) *Tharparkar*—this breed has been recently developed in Karnal (East Punjab and Patna). The cows are good milkers. Very good working or draught type of cattle are *Hissar and Hausi* (Punjab), *Nellore* (Madras), *Amrit Mahal* (*Mysore*), *Kangayam* (*Madras*), *Kherigarh* (U.P.), *Malvi* (Central India) and *Khillar* (Deccan).

The finest dual purpose cattle bred in Punjab, Gujerat and Kathiawar are known by the names of *Hissar* (Punjab), *Hariana* (Punjab and U.P.) *Kanrej* (Gujerat), and *Gir* (Kathiawar).

It is a significant fact that good cattle are generally found in dry areas and inferior cattle in areas of heavy rainfall. The rainfall map of India more or less coincides with her cattle map.

Thus Punjab, Rajasthan, Saurashtra, Mysore and drier parts of Bombay and Madras are homes of some of the best cattle in India, while non-descripts are found in areas of heavy rainfall, like Assam, Bengal, Orissa and Malabar Coast.

Indian buffalo is superior to Indian cow. The best known buffaloes are of Punjab, Jafferbadi buffaloes of Kathiawar and the Surti and Pandharpuri buffaloes of the Bombay Presidency.

Another cattle wealth of India is *sheep*. Estimated number of sheep in India is 4½ crores with an average produce of 8½ crores pounds of wool. The wool-producing States are Punjab, U.P., Rajasthan. The average production of wool per sheep in India 1·9 lb. There is an Wool Analysis Laboratory in Poona for the research of wool fibre and various other improvements. The annual production of wool of Indian sheep is very poor when compared to those of other countries. The wool produced in India is also of much inferior quality. As an exception, the Kashmir goats are famous for their fineness of their wool. There are some good sheep in parts of India like the Bikaner rams which are woolly types.

sheep is reared chiefly for mutton and wool. The woolly sheep is found in Coimbatore, Mysore, large portion of Deccan, Rajasthan Punjab (both West and East), Bihar and Bengal. Bengal and Patna sheep are noted for their good yield of wool and fatty mutton. The Delhi-Hausi or the Tutryghur sheep are the finest and the largest animals in India.

India's *goats* number about 58 millions. Goats are prized for their meat and milk. Goat contributes only 3 p.c. of the total milk supply of India.

Indian *pigs* belong to two principal specis namely, Indian wild boar found throughout India and pigmy hog in the forests at the base of the Himalayas in Nepal, Sikkim and Bhutan. Pigs are useful for bristles, lard, meat (pork, ham, bacon) and skin.

Horses are mainly used for transport. The Kathiawar breed of horses known as *kathi* is famous for its great powers and endurance. The Marhatta pony, the little Gujarat and Dimthadi of the Deccan are also famous. The ponies of Manipur are regarded as the best in India. Bhutia pony is also famous for powers of endurance and weight-carrying capacity.

Deterioration of Cattle—Iill-bred, ill-fed and ill-maintained as our cattle are today, the return from them is less than the amount expected. In a deteriorated condition, the milk production per cow in our country is the lowest in the whole world as the following statistics will show—

	Per cow per annum		*Per cow per annum*
India	.. 30 gallons	Sweden	.. 326 gallons
Belgium	.. 362 „	Switzerland	.. 380 „
Denmark	.. 387 „	Finland	.. 344 „
Netherlands	.. 373 „		

POULTRY—is divided in India into two groups—(1) Fowls comprising hens, cocks and chickens, (2) Ducks comprising ducks, drakes and ducklings. The total poultry for 1947-48 was estimated at 58,247 thousands, out of this, Part A States has 77 p.c., Part B 20·9 p.c. and Part C 1·5 p.c.

Distribution of Livestock and Poultry per head of population.

All India	*per head of pop.*	All India	*per head of pop.*
1947-48	.. 0·77	1949-50	.. ·74
1948-49	.. 0·74		

ANIMAL PRODUCTS—Besides animal products of milk and wool, the principal animal products of India are blood, bones, ivory, tallow, and hides and skins. Bones are used as manure and for manufacture of buttons, handles, toys, glue and as a source of superphosphates. Supply of horns comes from U.P., Punjab, Madras and Bengal. Buttons, toys, manure, glue, gelatine, etc., are made by horns. Ivory is used for the manufacture of ivory goods, bones and teeth. This supply comes from Assam, Western Ghats and Mysore. Tallow is derived from the fat of beef, mutton and goats. Its printing uses are as an adulterant, lubricant, and illuminant and in the manufacture of soaps and candles.

There is considerable export and trade in livestock products. While dairy products, such as condensed milk and cream, milk foods for infants and invalids, butter and cheese comprise the main imports, bones and horns are exported. At the same time, there is a two-way trade in hides, skins and wool.

MILK—The 1950 Report on Marketing of Milk in the Indian Union made certain estimates of production and yield for the Indian Union, though based on 1945 statistics, as follows—

	Lakh maunds
Total annual gross production	.. 5,826·9
of which from buffaloes	.. 2,921·9
cows	.. 2,721·8

Animal individual yields vary widely in different parts of the country. Cow's yields range from 65 lbs. in M.P. and Vindya Pradesh to 1,445 in East Punjab. Buffaloe's yield range from 315 lbs. in Assam's to 2,500 lbs. in Saurashtra. The Indian Union maintains nearly 15 times the number of cattle in Canada but produces only twice the quantity of milk. The greatest obstacle in the way of increased production of milk is shortage of feeding stuffs. The state of starvation to which the cattle in India is exposed is the main reason for the very low milk yields in India. In addition in the States of Bengal, Madras, Assam and to some extent Bombay, which are areas of heavy rainfall, cattle deterorate in stature, stamina and productive capacity. The probable cause is malnutrition and may be induced by the poor food value of paddy straws which form so large a part of the diet.

PROVINCIAL DISTRIBUTION—The largest number of oxen is found in the Uttar Pradesh which possesses 23·0 million heads or nearly 14 p.c. of the total for the country. This is closely followed by Bengal where there are nearly 22·6 million oxen or approximately 13·6 p.c.; Madras 9·6 p.c. of the total. For Buffaloes; U.P.—9·9 million or 29 p.c.; Punjab—6·92 million or 13·2 p.c.; Madras—6·1 million or 13 p.c.; Bengal—1·1 million or 2·3 p.c. of total buffaloes in India.2

The densities of oxen per 10 acres of cultivated area, per 100 persons and per square mile of the country as a whole are 4343 and 106 heads respectively. The all-India average density of buffaloes works out to 12, 12 and 30 respectively.

TRADE IN CATTLE—Bengal is the principal importer, followed by Bombay, U.P. and Bihar. The main exporting province in order of merit are Punjab, Bihar and Orissa.

LIVESTOCK CENSUS 1951

(*In thousands*)

	1947-48	1948-49	1949-50	1950-51
Bovine ..	175,106	173,098	173,432	195,034
Ovine ..	81,989	80,086	79,962	88,586
Others ..	6,888	6,868	6,871	7,870
Total ..	263,983	260,052	260,265	291,490

FOREST IN INDIA

FOREST WEALTH OF INDIA—The forests in India play an important part in country's agricultural and economic developments. The forests cover 1,60,104 sq. miles or about 13·10 p.c. of land surface of the country. The role of forests in conditioning the weather, in preventing the erosion of soil and in short in maintaining the physical condition is not yet fully appreciated. India contains an infinite variety of types of forest vegetation, governed by the variations in climate, soil, elevation and other local factors. The forests of India are a source of considerable wealth. They yield valuable timber. Our railway system leans heavily on Indian timber; paper, plywood, bobbins, match industries depend on timber resources. The forests also yield large quantities of fuel. The variety and abundance of Indian economic forest products are perhaps unequalled in any other similar area in the world.

Full value of India's forest wealth is not to be assessed merely in terms of money, timber output, fuel and innumerable by-products; for forest land serves other ends, by mitigating the extremes of the fiercest climate in the world and breaking the force of the world's heaviest rainfall.

FOREST VEGETATION OF INDIA—is divided into five types—(1) *Evergreen*, (2) *Deciduous*, (3) *Dry*, (4) *Hill*, (5) *Tidal or*

Littoral. Evergreen flourishes where rainfall is 80 to 120". They include many species of great economic value such as ebony, teak, rosewood, ironwood, bamboos, neem and tamarind. *Deciduous* (rainfall 60 to 80") occupies the larger part of the Deccan and is also known monsoon forests. The trees are large-sized and form very remarkable timbers such as, teak, sal, paduk, redwood, sandal wood, anjan etc. *The Dry forests* (rainfall 30 to 40") are found in the desert regions of Rajasthan and the Punjab and the plants are characterised by thick and fleshly stems and leaves and mostly consist of thickets of shrubs and a few stunted trees ; many of them are leafless. *The Hill forests* are found in South India above 5,000 feet and in the Himalayas above 3,000 feet altitude. The trees are evergreen, of which the following are the most prominent—oak, picea, deodar, pines, firs, chestnut, walnut, maple, elm ash, birches, laurels, poplar, rhododendron and spices of abics. *The Littoral forests* are found in the deltas of the Ganges, the Mahanadi, the Indus and also to some extent in the regions washed by the high tide and salt water. They are rich sources of fuel. These forests are known as Mangrove Forests.

NATIONAL FOREST POLICY—The national forest policy of India was enunciated in 1952. Among the land marks of the new policy is the recognition accorded to the intrinsic right of forests to a permanent and adequate share of land. So an indication has been provided of the proportion of land which should be permanently maintained under forests.. This naturally varies with the configuration of the ground and rainfall. Thus, while in the flat Indo-Gangetic plain where slope in imperceptible and erosion is not a serious problem, the average proportion of forest land to be reserved need not be more than 20 of the total land area ; in the mountainous tracts, with higher rainfall, a much greater area (about 60 p.c.) must be maintained under forest growth. The new policy directs pointed attention towords reconditioning of hills and dales, the immobilization of the Rajputana desert, the prevention of the encroachment of sea-sands on coastal tracts, the rationalization of shifting cultivation and control of soil erosion in general. The policy legislates for the functional classification of forests such as "protection," "national" and 'village' forests.

The national policy calls specific attention to the need for forest research, forest education to ensure efficient administration of forest.

CLASSIFICATION OF FORESTS—The forests are divided into four classes, *First*, protective forests, those which are necessary for the prevention of soil erosion and floods ; *Secondly*, timber forests, which form a source of revenue to government ; *Thirdly*, minor forests which chiefly supply fuel, fodder and timber to local population ; *Fourthly*, pasture lands which are not strictly forests but are under Forest Department for convenience.

Forests are further classified into *Reserve* forests, *Protected* forests and *Unclassified* forests. In reserve forests there is strict control of forest officers ; in protected forests the local villagers usually have rights of grazing, fuel and fodder cutting which are recorded and supervised by forest officers. In the case of unclassified forests, there is no systematic attempt at their management.

SOME FOREST STATISTICS—India produces annually about 27,411,700 sq. ft. of various woods (both timber and fuel wood). From official statistics it is estimated that the forest of India amounts to 1,078,35,00,000 sq. feet and the annual cutting amounts to 27,06,93,000. The annual income of the Government of India from the Indian forests is about Rs. 10,48,01,000.

CENTRAL BOARD OF FORESTRY—The Government of India have constituted a Central Board of Forestry in 1950 for the purpose of evolving an all-India policy to increase the area under forests. The functions of the Board are—(1) Coordination and integration of the forest policy pursued by States in the management of their forests, (2) adoption of conservation measures affecting forest resources and soil, (3) integration of plans for land use and national reconstruction in which forestry has come to play a progressively important role, (4) promotion of legislation considered necessary for various States for the management of private forests, (5) regulation and development of forests in inter-state river valleys which are the concern of the Central Government, (6) Maintenance of adequate standards for training of officers, (7) coordination of forest research conducted in Central and State institutes and (8) any other matters affecting forestry, which are relevant to the objective of the Board.

PRESERVATION OF FORESTS IN INDIA—The preservation of forests has become a national problem in India. India has been losing its forest wealth for following reasons—(*a*) progressive exhaustion of soil due to the operation of the law of diminishing returns, (*b*) reckless burning, for the lack of alternative fuel, the cowdung which should go to fertilize the impoverished soil ; (*c*) erosion of land which is increasing in alarming proportions. For this reason, various schemes are being mooted out. In 1950 *Vana Mahotsava* was originated to instil among the masses a love for trees —the silent sentinels mounting guard on mother earth. This national festival is held every year.

FOREST EDUCATION AND RESEARCH—The scientific forest management in India owes its inception to Dr. Brandis, a professor of Bombay from the University of Bonn, who was engaged by the Government of India in 1856 as superintendent of teak forests in Burma. Later in 1864 he was appointed first Inspector-General of Forests in India. It was as result of his initiative that Forest Departments were organised throughout India.

The nucleus of forest research and education in India is traceable to a forest school started in 1878 in Dehra Dun under the auspices of the Survey of India by the Government of N. W. Province (now Uttar Pradesh). The school enjoys the distinction of being first of its kind in British Commonwealth. In 1884 the school was taken over by the Central Government. By 1906 this institution became the nucleus around which the existing organisation of the

Forest Research Institute and Colleges have been built up. In 1912 special courses for the Provincial Forest Service officers were initiated and Institute was shifted to Chandbagh in 1914. In 1925 the Institute was housed in its existing premises of 1,300 acres acquired and constructed at cost of Rs. 1,300,000 and Rs. 6,300,000 respectively.

Primarily the work of the Institute is research into problems connected with rearing and protecting India's forests and enhancing their value and usefulness, and secondly the more efficient and profitable utilisation of timber and various other produce of these forests. Four excellent museums are maintained by the Institute. Of the four museums, one is known as the timber museum which is devoted to a display of the great variety of India's timbers in the form of polished and unpolished boards. It also contains demonstration models of wood seasoning, wood preserving and timber testing installations. The second museum is arranged to indicate the infinite range of India's forest products and to indicate the methods of their extraction and utilisation. The third museum houses large scale models to demonstrate silvicultural practices and the evils of soil erosion. The fourth museum draws attention to the extent of insect damage to Indian trees and the timber.

The Forest Institute also provides training for Forest Officers and Rangers.

Silviculture Branch of the Forest Research Institute carries investigations mainly concerned with different methods of raising crops, documentation of various crops, their silvicultural requirements etc. *Botany Section* maintains an extensive herbarium. *Mocology Section*, works on the standardization of Indian wood rotting fungi, fungus diseases of sal and diseases of conifers and similar other problems. *Wood Technology Section* carries on researches on the study of woods. There is also *wood seasoning section*. Another important All-India Forest College has been started by the Central Government at Coimbatore, Madras. Research in forestry is also undertaken by Central Lac Research Institute.

INDIA'S FOREST PRODUCTS—The flora in India is both rich and varied in composition and value. The number of species met with is estimated at 30,000, the vast majority of which are of no more than academic interest. We may mention, however, valuable timber species such as conifers (*pines, firs, deodars*), the principal species of the sub-tropical zone, and the well-known *teak* which is met with throughout the Deccan plateau. The chief among other species of commercial importance are *dipterocarpus, acacias, sissoo, sandalwood* and *bamboos*. The forests in addition, yield a bewildering variety of minor forest products which are utilised in indigenous medicine and industry. The various plants and their derivatives account for items such as essential oils, resin, gums, medicinal herbs, fatty oils, vegetable dyes, tans, soap-berries, fibres, flooses, edible wild plants, canes, grasses. This is not all. Animal products such as honey, beewax, lac, bones, hides and horns play an important part in the home market and abroad.

Major products of the Indian forests are timber and fuel woods, and minor products are essential oils, dyeing and tanning substances, gums and resins, lac, beewax and honey etc. The principal varieties of timber is *Sal, Teak or Sagun, Jarool, Deodar, Sissoo, Toon.* The important trees of commercial importance are Oak, Rosewood, Sundri, Simul, Babul, Mulberry, Siris, Neem, Palas, Jam, Kusum and Mango.

Oil trees are *Chandan* or sandal-wood found in southern India (Mysore, Coorg, Western Ghats, Nilgiris). The oil is also extracted from the seeds and nuts of various other trees, such as *Chalmugra, Satinwood, Croton, Cocoanut, Oil Palm, Pine, Deodar, Kusum, Neem, Mahua, Garjan.*

The gum and resin yielding trees of India are *Babul, Catchu, Sal, Pine, Mango* and *Banyan. Asofoedita* or *hing* is available in Kashmir only.

Sal is very hard, heavy and tough wood with reddish brown colour. It is largely used as railway sleepers. It is also universally used for constructional and domestic purposes.

Teak is a strong wood of great durability. It is immune to attacks of white ants and insects for very long periods. It grows in the deciduous forests of the Deccan plateau in Madhya Pradesh, Orissa, Bihar, Bombay and Madras.

Arjun is heavier and harder wood than teak. It grows all over the deciduous region.

Kusum is a very heavy, hard and tough wood. It grows in the deciduous forests. 'Lac' insects are also reared on it.

Ebony is a very dark green or greenish black wood of great strength. It is obtained all over the deciduous regions excepting N.E. parts.

Siris is a fairly strong wood. It is obtained all over deciduous forests.

Palas is important for its crop of 'lac' insects. It grows largely in Chotanagpur and also over the plains of northern India.

Mahua is very common in Chotanagpur area. Its flowers are important articles of food. A course spirit is distilled from Mahua.

Semul is well-known for the cotton it yields. Its wood is very soft and perishable and is suitable for matchbox manufacture.

Jarool is of medium strength and is employed for making cheap classes of furniture. It is found mainly in Assam, West Bengal, and is also found in Chotanagpur.

Deodar grows in Western Himalayas. It is largely used as railway sleepers, also for bridge work and house-building, wood curving. It comes mainly from forests of Punjab and Kashmir.

Sissoo is used for agricultural implements, frames of carriages, boat-building, furniture and wood-carving.

Toon or Indian mahogany is used for furniture, wood-carving, boat and canoe making.

Oak is available in Eastern Himalayas, Khasi Hills and Manipur. It is used for buildings, agricultural implements, axe-handles.

Rosewood is found in various places from Nepal to Travancore. It is used extensively for furniture, cabinet-work, keels of vessels, agricultural implements, combs, ornamental articles, finely carved chairs and tables.

Satinwood is found in the dry forests of Circars, Konkan, Deccan and Karnatak and is common in Satpura range. It is largely used for cabinet work, picture frames, furniture, etc.

Indian Blue Pine is grown extensively in the temperate Himalayas. It is used for planking, doors, windows and furniture, tea boxes.

Fir is grown in outer Himalayas, the Punjab and Kashmir and is used for packing cases, crates, shingles, boards and paper pulp.

Babul tree grows in Western India and is used for all forms of agricultural implements.

Sundri is available in the deltaic regions of Bengal, particularly in Sunderbans and in the coasts of Orissa. It is a very hard wood.

Canes and Bamboos are extensively found in Eastern Nepal, Sikkim, Bhutan, Assam, Bengal, Madhya Pradesh, Deccan, Konkan and Coromandal Coast. *Bamboos* grow everywhere in India. It has numerous varieties, from giant bamboo of Assam to dwarfs of dry region. It is used for paper making and for other various objects. Cane is used for basket works, mats, walking sticks, ropes and in the manufacture of paper.

Grasses are generally used for fodder for the cattle. *Sabai* grass is used for paper making. *Munjh* grass growing in all parts of India and specially in the Punjab is used for thatching, paper-making, chairs, baskets, ropes and cordage. *Rhea* grass found in Assam and Bengal is used for belting, sheeting, lace, net, cordage, sacking, etc.

Lac is an important Indian forest product. It is produced from an insect which secretes its larvae on certain class of trees. Lac is produced throughout the warm tropical areas of the whole of India. The principal places of production are M.P., Bihar, Bengal, Assam, Sind and Gujerat. Lac is extensively used in the manufacture of gramophone records, plastics, lacquer work, mouldings of ornaments, paint and varnishes, sealing was etc.

Bee Wax and Honey are also important forest products. Bee wax is used in candles, foundary moulding, calico printing and medicine. It is largely used by the shoemakers of India.

Gums and Resins—gum and resin yielding trees in India are *Babul, Catechu, Sal, Pine, Mango* and *Banyan.*

Tanning materials—various tanning materials are found from Indian forests, most important of which are myrobalan. They are found all over the deciduous forests.

Sandalwood is used for producing sandalwood oil and from oil, soaps and scents are made. It is mainly obtained in Mysore.

FOREST LANDS OF INDIAN STATES

	Area (sq. m.)	*Forest Lands (sq. m.)*	*p.c. of Forest Lands*
Ajmer	2,367	593	25·1
Andaman & Nicobar Islands ..	2,500	2,500	100·0
Assam	55,445	21,637	39·0

Bihar	69,745	9,947	14·0
Bombay	76,026	12,872	16·9
Madhya Pradesh	98,573	47,057	47·7
Coorg	1,582	1,175	74·3
Punjab	38,780	4,761	12·3
Madras	1,25,163	33,666	26·9
Orissa	32,695	4,492	13·7
Uttar Pradesh	1,06,248	17,372	16·4
W. Bengal	28,215	4,284	15·2

TOTAL FOREST AREA

(*Square miles*).

	Total Forest area	*P.c. of total forest area to total land*		*Total Forest area*	*P.c. of total Forest arae to total land*
1939-40	135,014	21·5	1943-44 (b)	154,934	24·6
1940-41 (a)	135,161	21·5	1944-45 (b)	155,064	24·7
1941-42	157,931	25·1	1945-46	159,255	25·1
1942-43 (b)	155,739	24·8	1946-47	160,356	25·2

(*Vide Indian Forest Statistics*, 1949)

(a) excludes figures of Assam.

(b) excludes figures for Andaman and Nicober Islands.

DAIRY FARMING

A large proportion of Indian population is vegetarian. Consequently milk is a valuable item of our diet. So the importance of dairy farming can not be over-estimated. The daily consumption of milk and milk products is 5 oz. per head whereas the maximum requirement from the nutritional point of view is 21 oz. The average annual milk yield of the cow in India is 600 lbs. compared to 5,400 lbs. in Britain.

MILK ADULTERATION—The Agricultural Marketing Adviser to the Government of India says in his report of 1950 that "adulteration of foodstuffs, including milk is not uncommon in Western countries, but the position is nowhere as bad as in our country. Adulteration is as widespread that consumers have became almost indifferent to quality."

Legal standards prescribed under State Food Adulteration Acts are lower than the constants for locally produced pure milk and therefore leave room for 'legalized' adulteration with water or skimmed milk. There is a strong feeling in the country that official control of the quality of market milk has been very lax.

The enforcement of the Food Adulteration Acts which rests entirely in the hands of the municipal authorities has been most unsatisfactory. The municipal authorities have therefore been urged to be more vigilant in the matter of quality control of milk and dairy products.

POOR YIELD—Although India has 31·9 m more milch cattle than all the countries of Europe (except Russia) taken together, her production of milk is only about one-fifth of that of Europe. The production of milk in India is also only about one-fourth of that in the U.S.A. although India has 60·6m she-buffaloes, (aged three and above) against 38·9m in the U.S.A.

The annual production of milk in India is estimated to be 481,600,000 maunds, valued at over Rs. 354 crores. Of the total production, buffalo milk accounts for 54·4 p.c., cow milk 42·8 p.c. and goat milk 2·8 p.c. The average annual yield of hand-drawn milk per cow in India is 413 lbs. and per she-buffalo 1,101.

Milk production in India has not kept pace with the increase in human population. It is also believed that the milking capacity of the Indian cattle has deteriorated rather than improved during recent years. Most village cattle are semi-starved and badly managed. Better feeling and management of these cattle are likely to increase the output of milk by at least 20 p.c.

LOW CONSUMPTION—The average daily per capita consumption of milk, including milk products, in India is about 5 ounces as compared to the pre-war consumption of 41 ounces in the U.K. and 36 ounces in the U.S.A. Within the country the average daily consumption varies from 18·8 ounces in Saurashtra to 1·2 ounces in Assam. Of this meagre quantity not more than 36 p.c. is consumed as fluid milk.

The average milking capacity of the Indian cow is very poor indeed. It is 525 pounds for the whole year. But there is a great possibility of increase as the special herds of cows of the Sahiwal breed have produced as much as 6,600 to 7,744 pounds.

The Indian buffalo is superior to the Indian cow as a milk producer, its annual performance being 1,270 lbs. as against 525 lbs. of the cow. The butter-fat in the milk of the Indian cow is 5 p.c., as against England cow's 3·8 p.c., in the buffalo it is 8 p.c.

Dr. Ackroyd, the nutritional except with the Government of India says 'the milk of Indian cows contains 25 per cent to 50 per cent more fat than that of European cows, while buffaloes' milk contains more than twice as much. The higher fat content of milk produced in India compensate to some small extent for the low yields per milking animal."

Bulk of milk supply of the country is produced in rural areas.

The principal centres of ghee are Khurja, Aligarh, Hathras, Shikohabad, Etawah and Balliah in U.P., Darbhanga, Dinapore and Lakhisarai in Bihar and Guntur in Madras.

INDIAN DAIRY SCIENCE ASSOCIATION—was formed in 1948 with the object of advancing the cause of the science of dairying in India by co-ordinating and unifying the activities of dairy scientists in the country towards rapid advancement of nation's dairy industry.

INDIAN DAIRY COUNCIL—has been inaugurated in 1948 with the object of promotion and safeguarding the interests of the dairy industry in India. It is a common platform on which representatives of various interests of the milk industry, such as producers, consumers, trade and technicians could meet together for developing it on sound and economic footing.

DAIRY EDUCATION—There is an *Indian Dairy Research Institute* at Bangalore. The Institute is a central organisation for dairy research and education under the direct control of the Ministry of Food and Agriculture. Apart from its administrative office and dairy, there are four research sections, namely, Dairy Husbandry, Dairy Chemistry, Dairy Technology and Dairy Bacteriology. The most important work carried out by the Dairy Husbandry section relates to scientific breeding, feeding and management of dairy cattle in order to increase their milk yield. The institute also forms the centre for artificial insemination of dairy cattle. The Institute offers training for the Indian Dairy diploma course for two years to students and a short course of three months' duration to men in the trade deputed by the Government. Besides these, the Institute entertains a limited number of science graduates as honorary research workers for carrying out advanced research work and it also offers a post-graduate course for 15 months leading to the Associateship of Indian Dairy Research Institute. *The Veterinary Research Institute* at Izzatnagar, the *Dairy Research Institute* at Bangalore and *Cattle Breeding Station* at Jabalpur carry out research on animal husbandry. The Veterinary Research Institute, besides teaching and advisory work, manufactures biological products. The Dairy Institute carries on development work in respect of pedigree herds of Red Sindhi, Gir and Tarparkar cows and Murrah buffaloes. The Cattle Breeding Station carries out cross-breeding of cattle under controlled conditions.

GHEE PRODUCTION IN INDIA—The annual production of ghee in Indian Union is estimated at one crore and fifteen lakh maunds *i.e.*, half of what it was in undivided India ten years ago. In order of importance, the main ghee-producing areas are Punjab, U.P., Madras and Bihar which account for 15·7, 13·8, 9·8 and 5·4 of the total production respectively. Thus three-fourths of the ghee production is concentrated in Northern and Western India and the remaining two-fifths is scattered in the rest of the country. Taking the country as a whole, India produces 8·9 maunds of ghee per square mile, 21·4 maunds per village and 3·6 maunds for 100 persons. The annual per capita consumption of ghee in India is highest in Gwalior and Sind with 15·5 and 11·2 seers respectively and the lowest in Hyderabad and Bengal with 1·1 and 1·3 seers respectively. Of the total ghee production nearly 30 p.c., is retained by the producers for domestic consumption and 70 p.c. is marketed.

India imports about 66,000 maunds of ghee mostly by land frontier routes from Nepal. India also exports about 66,000 maunds of ghee to the Straits Settlements, Burma, Federated Malaya States and Africa. (*Ghee Marketing Report of the Government of India* 1948).

GHEE ADULTERATION—With a view to distinguish genuine from adulterated *ghee*, the Government of India have been developing an organisation for grading and marking of genuine *ghee*. The grading organisation started its work in 1938 and its mark is now known as Agamark. In 1947 the amount of agamarked *ghee* was about 2½ lakh maunds. The inadequacy will be clear when we see that this 2½ lakh maunds of certified agamarked ghee constitutes only 2·2 per cent of the ghee produced in the country. On an average only one sample is collected and examined for every 550 maunds of ghee consumed in the country. Experience has shown, generally speaking, 50 per cent of the sample tested are found to be adulterated.

At present the grading under Agamark is voluntary. The ghee adulteration by mixing *Vanaspati* (hydrogenated oil) has become so widespread that the Government of India have been compelled to put the matter in the hands of an expert Committee, known as Ghee Adulteration Committee which has recommended that every lot of *Vanspati* produced in a factory should be accompanied by a certificate that it gives Baudouin test ; that the *Vanaspati* should be coloured orange by using carotine oil concentrate as colouring medium, in addition to sesame oil ; and that the *Vanspati* should be fortified by synthetic vitamin 'A' so that its nutritive value may be increased. The Government have accepted the first and the last recommendations. As regards second, further experiments are to be conducted, for the colour suggested was unstable and involved expenditure in dollars.

WILD LIFE IN INDIA

India has a rich and varied fauna comprising fish, birds and mammals. The diversity which manifests itself in the variations in rainfall, temperature and climate, determine the distribution of its wild life. For the purpose of distinguishing the wild life in India, we can divide the country into three broad physical regions—(1) *Himalayas*, (2) *Indo-gangetic Plain* and (3) *Deccan*.

Physical Regions of Animals—Himalayas—The Great Himalayan arc occupies the region between the gorges of the Indus and the Brahmaputra covering a length of about 1,500 miles. The Himalayas can again be divided into three regions—Western Himalayas, Central Himalayas and Eastern Himalayas.

Western Himalayas—supports rich and varied wild life—such as markhor, ibex, wild yak, choral, Tibetan antelope, brown and black bear, tahr, the Kashmir stag or hangul, barking deer, snow leopard, serow, goral, sambar and ammon. The markhor, wild sheep, snow leopard and brown bear occur nearer the snow line above 10,000 feet on Tibetan border and in Ladakh in particular, one comes up against ammon, Tibetan antelope, wild yak, bharal, ibex and Tibetan gazelle.

Central Himalayas—While most of the Western Himalayan wild life persists in this region, ibex and markhor disappear and brown bear are seldom met with to the east of the Ganges.

Panther is plentiful. The main sports of the Central Himalayas are Jaunsar-Bawar and Tehri-Garhwal and Kumaun.

Eastern Himalayas—Both panther and tiger are common along the foothills. Occasionally the great one-horned rhinoeros is also met with.

Indo-Gangetic Plain—lies like a moat skirting round the Himalayas from the Bay of Bengal upto the western boundaries of India. The representative animals met with in this region are—black buck, nilgai and pigs in the centre, tiger, panther, sambar, barking deer, elephant and rhinoceros. So in the *foot of Himalayas* we have tiger, panther, sambar, bear, barking deer, elephant, buffalo, and rhinoceros (Assam and Bengal), chital, hog deer, swamp deer and four-horned antelope. In *central plain*, we have black buck, nilgai, pig, porcupine, in the Thar desert we find desert cat, desert fox, desert hare and species of desert gerbilles. The moist eastern tracts have rhinoceros, buffalo, swamp deer. *In the Aravallis and Southern Highlands*, we have tiger, panther, sambar and barking deer.

Deccan—The Deccan plateau have three distinct regions—West Coast, East Coast and Central Plateau. In the open savannah lands of the Deccan, we have gazelle, antelope, jungle cat, common fox, mongoose, hyaenas, jackal, wolf, palm squirrel, hares and rodents. In the deciduous forests, we have bison, sambhar, spotted deed, sloth bear and wild dog. In more humid zone, we have swamp deer, buffalo and elephant. In Nilgiris, Palnis and Anamalais and evergreen forests of the Western Ghats, we have wild elephant, bison, nilgiri langur, lion-tailed macaque, Nilgiri brown mongoose and Malabar civet. It may be noted that the exclusive feature of the Deccan animal life is constituted by the spotted deer, nilgai, black buck, four horned antelope and sloth bear—species which do not occur anywhere else outside India.

VARIETIES & DESCRIPTION OF ANIMALS

(a) **Himalayan Species**—(1) Sheep—shapu of Ladakh, Bhoral; (2) Goat—Asiatic Ibex, markhor, Himalayan tahr, serow, goral, takin; (3) Deer—Kashmir stag, musk deer; (4) Bears—Himalayan brown bear, Himalayan black bear; (5) Carnivora—snow leopard, clouded leopard;

(b) **Tibetan Species**—(1) Yak, Tibetan wild ass, Tibetan antelope, Tibetan gazelle, Great Tibetan sheep.

(c) **Indo-Gangetic Plain and the Deccan**—(1) *General*—Indian rhinoceros, Indian elephant (b) Deer—Sambhar, spotted deer or chital, hog deer, swamp deer, backing deer, mouse deer (3) Antelopes—Nilgiri, black buck, Indian gazelle, four-horned antelope (4) Bovines—Indian wild buffalo, gour or Indian bison (5) Bears—sloth bear, malayan bear (6) Carnivora—Asiatic lion, tiger, panther, hunting leopard or cheetah, (7) Hyaena—striped hyaena (8) Dog—Indian wild dog (9) Goats—Nilgiri tahr.

Discription of Animals—*Indian rhinoceros* is probably the largest of living rhenoceroses. It may reach 6 ft. at the shoulder with girth behind the shoulder of 11 ft. or more. This creature is in fair number in the Chitawan forests of the Nepal Terai of the Gandak river and it is also found in Bengal and Assam. *Elephants* are at present found in the forests of the Western Ghats, in the forests of Mysore, parts of the districts of Coimbatore, Nilgiri and Madura and Palni hills (South India), occasionally in the eastern parts of Visakhapatnam and in considerable number in the Orissa State, east of Mahanadi river. They also occur in the Tarai of U.P. in the forests of Assam and Bengal and in some parts of Orissa, east of Sambalpur. *Sambar of India* is the largest of forest deer in South-East Asia. *Chital or spotted deer* is found only in India and Ceylon and is widely distributed in India. *Nilgai or blue bull*—a kind of antelope so named on account of the colour of the fully mature animal. *Black buck* is exclusively Indian animal. *Indian buffalo* is becoming scarce and can be seen on Mahanadi river in the north-west corner of Orissa and in Assam. *Indian bison* is found in Peninsular India and in Assam. *Asiatic lion*—is now to be met with only in the Gir Forest of Saurashtra. *Tiger* is available in Chanda District (M. P.), Eastern Kumaun, Sunderban forests. *Panther*—there is but one species of panther in India. *Hyaena* occurs freely all over India. *Indian wild dog* is found from Ladakh, Tibet down to the plains and the Deccan plateau. *Indian gazelle* is found in many parts of India from Indus to the South. *Mouse deer* is a tiny creature. It is quite plentiful in some areas of Central India and Madras State. *Hog deer* is some what pig-like appearance and has hog-like movement. This deer is common in sub-himalayan tracts and in Assam. *Clouded leopard* has dark and rich colouring. It is found only in the dense evergreen forests of Sikkim, Bhutan, Chittagong Hill Tracts and Assam. *Himalayan black bear* is fairly common in Kashmir and in other parts of Himalayas and occasionally in the Terai forests.

PROBLEM OF WILD LIFE IN INDIA

Disafforestation in India had during last two thousand years have totally changed the face of many parts of India. Sportsman's whip had butchered wild life and certain rare animals were nearing extinction. Indiscriminate cultivation in the interior of forests brings about needless interference with "nature's reserves." The importance of forests, where alone genuine wild life can be preserved is coming to be realised more and more. Realising the need of preserving the wild life of the country, the Government of India set up in April, 1952 an *Indian Board of Wild Life* to assist those in this line.

Desperate efforts had been made in India to save the last surviving lions in the Gir forest in Kathiawar and Indian rhinoceros in Assam, Bengal and Nepal. In 1951, there were 225 lions and 300 rhinos in India. Our wild life assets are vanishing and will require urgent legislation, propaganda and executive action to save the situation.

A good amount of planning and scientific attention are necessary in setting up parks, reserves and sanctuaries. The following proposals have been made by the Indian Board of Wild Life—(1) Setting up sanctuaries, (2) legislation for the protection of wild animals and birds, (3) appointment of observer for wild life, (4) adoption of stringent measures against destruction of wild life by employing poisoned weapons, nets, snares and explosives, (5) setting up of permanent machinery to keep constant vigil and for management of wild life throughout the country, (6) creation of buffer belts round the sanctuaries where the shooting of animals was to be prohibited, (7) periodical inoculation of domestic cattle in the neighbourhood of all national parks and sanctuaries against cattle-borne disease, (8) prohibition of the export of trophies except under certificate of ownership, (9) prohibition of netting of birds and animals during close periods and their sale, (10) fixation of annual limits regarding export and import of animal for the purpose of zoos, circuses and scientific institutions.

BIRD PROTECTION

National Committee for Bird Preservation has been formed in India in 1952 for the protection of some of the species of wild life which are now in danger of extinction. There are in India about 1,500 main species of wild birds. These are again sub-divided into several smaller sub-species. An important factor contributing to the depletion of certain species was the indiscriminate killing of rare birds for their feathers. There is urgent necessity of proper care of certain areas in the country which are already being used as sanctuaries such as heronary at Bharatpur in Rajasthan and the flamingo breeding grounds in Cutch.

NATIONAL PARKS AND SANCTUARIES IN INDIA

Jammu & Kashmir—Three game sanctuaries in Jammu and three game sanctuaries in Kashmir.

East Punjab—Eleven game sanctuaries.

Pepsu—Game sanctuaries in the District Kandaghat and all the other reserve forests.

U.P.—(1) Hailey National Park, Garhwal (2) Rajaji Sanctuary, Siwalk Hills (3) Kansran Sanctuary, Dehra Dun forest (4) Nanda Devi Sanctuary, Kumaon.

W. Bengal—Sanctuaries in Darjeeling, Jalpaiguri and Boxa.

Assam—(1) Monas Game Sanctuary, North Kamrup (2) Sonai Rupai Game Sanctuary, Balipara (3) Pabha Game Sanctuary, North Lakhimpur (4) Kaziranga Game Sanctuary, along Assam South Trunk Road (5) Orang Game Reserve, Mangaldai to Tezpur (6) Umtee Sanctuary, E. &. J. Hills (7) Sanctuary for rhino and buffalo, Maktaeogaon and Maula blocks of Ripu reserve in Goalpara West Division (8) Reserve for rhino, Laokhowa Area (9) Tirap Frontier Tract National Park, N. E. Border of Assam.

M.P.—(1) Tairoba Game Reserve, North Chanda Division (2) Bori Game Reserve, Hosangabad Dn. (3) Banjar Game Reserve, Mandla Dn.

Bombay—(1) Kanheri National Park, Kanheri valley (2) Wild Life Sanctuary & National Park, Kulgi & Virnoli North Kinara Dist.

(3) Elephanta Island.

Madras—Madumalia Wild Life Sanctuary, Nilgiri Dist.

Mysore—(1) Venugopala Wild Life Sanctuary (2) sanctuary for birds, Near Seringapatam (3) Fish Sanctuary, Ramnathpur (4) Miniature National Park, Mysore Zoo.

Travancore-Cochin—(1) Periyar Catchment area Sanctuary (2) Peermade Game Association Area (3) A Reserved forest serving Sanctuary and National Park.

CINEMA IN INDIA

HISTORY OF THE FILM INDUSTRY—Since the day Dada Saheb Phalke produced the first Indian film *Harishchandra* in the year 1912, the cinema industry has been making steady progress. By 1928, production had reached 80 full-length films per year. The movie gave place to the talkie in the year 1931 when the first Indian talking picture *Alam Ara* was presented to the screen by the Imperial Film Co., Bombay. The conversion of the Indian film industry to sound was more or less complete by 1935. To-day India now produces 250 to 280 pictures a year. India stands today second only to Hollywood in film production, but it must be admitted that this huge production is not correlated to a high level of creative excellence. Indian film industry consumes about 200,000,000 feet of raw film every year and employs about 70,000 people in this industry. Besides, it has produced a good field for several auxiliary business like publicity, make-up etc. Cinema industry occupies eighth place among the industries of India. But expansion of industry is handicapped by the lack of theatres. We have only 3,200 cinemas in our country as compared to 17,000 in America and 5,100 in England. In other words, there are only six cinemas for a million population as compared to 125 in U.S.A. and 120 in U.K. Yet India is only second to U.S.A. in producing pictures, Britain being a 'poor third.' In our country production has gone up by over 100 p.c. in the post-war period, while there has been only over 10 p.c. increase in the number of cinemas.

The early development of the industry took place in Bombay, which to-day is Hollywood of India. Next in importance to Bombay is Madras with an annual production of more than 50 pictures, Calcutta's output is about 40, mostly in the Bengali language.

FILM ENQUIRY COMMITTEES—In 1928 first Film Enquiry Committee was appointed by the Government of India with Dewan Bahadur T. Rangachari as Chairman. This committee made the following recommendations—(1) Constitution of All India Board of Film Censors, (2) Formation of a Central Bureau of Advisory Committee, (3) Financial aid to producers, (4) Abolition of Import Duty on raw films, (5) Construction of more theatres, (6) Reduction of entertainment tax etc. The second Film Enquiry Committee was appointed by the Government of India in 1949 with S. K. Patil as chairman and the report was issued on October, 1951.

The Report stated that the industry is not in a position to undertake reform of its own, evils having crept far too deep into the system and defects being far too widespread.

The technical elements in the films have improved in standards, but where intellect and art are involved, the films to-day exhibit poverty as the themes are stereotyped and plots monotonously uniform in pattern.

The following are the recommendations of the Committee—(1) the creation of an autonomous statutory *Film Council of India.*

The proposed Film Council of India will act as the industry's 'friend, philosopher and guide' and will provide the necessary inspiration to conduct its affairs on healthy and constructive lines. The Council would set up panels to deal with different activities of the industry as well as research, the manufacture and supply of raw materials. The statutory nature of the Council will enable it to intervene effectively in disputes between different branches of the industry ; in regard to standards of production, however, the Council should function through the Production Code Administration.

Funds for the Council will be raised mainly through a cess on raw cinema film imported into or manufactured in this country, exposed cinematographic film from abroad and 10 per cent of the net income derived from the levy of entertainment tax on the exhibition of films. The proceeds of the cess will be utilised in research and training institutions for the industry.

The Council will run institutes for training of film artistes and technicians. To give a fillip to improved production standards, the Council will award annual prizes for the best story, best direction, best review and the best film.

An Educational Panel of the Council will be charged with the task of encouraging production of educational and children's films.

(2) *Production Code.*—As an adjunct to the Film Council, the Committee recommends the setting up of a Production Code Administration. Its Panel of Experts will scrutinise every script and exercise some control over the production. In particular, the PCA will have to approve the films for export and will have branches at Delhi, Madras, Calcutta and Bombay and will be run by the Government in the initial stages.

(3) *Film Finance Corporation*—The Film Finance Corporation proposed by the Committee will have an initial capital of Rs. 10 million subscribed by the State, industry and public. It may borrow an equal sum, with the approval of the Reserve Bank. "If the film industry is to be rehabilitated, the Committee sees no escape for regulated finance being made available to film producers through the Film Finance Organisation."

(4) *Taxation Relief*—The adoption of a uniform entertainment tax tariff at 20 per cent of the gross takings has been stressed as a dire need by the Committee, with a view to aiding the industry. It has also proposed a review of other miscellaneous fees, like licence fees for operation of cinemas and storage of films.

The Committee has recommended placing on O.G.L. raw film imports up to 240 milion feet per annum. The distribution will be done through film associations.

Provision has been made for import also of studio equipment up to Rs. 45,00,000 a year and projection apparatus for replacement and expansion.

(5) *Foreign Markets*—The Committee believes that in addition to expanding present overseas markets for Indian films, it might be possible for them to get into the English-speaking regions. An export corporation has been envisaged to look after this aspect.

No unprocessed film is to be allowed to be sent abroad without approval of the Production Code Administration.

(6) *Short Films*—In the absence of any regular prospects of the industry producing and exhibiting 'approved films' voluntarily, the Committee feels that the present system of production and distribution of shorts and news-reels by Government should be continued in view of their proved usefulness.

Government of India's Control—Department of Information and Broadcasting which was for many years a part of the Department of Home Affairs in the Government of India, has been separated in 1949 under the control of a separate Minister of State. This department is now known Ministry of Information and Broadcasting and controls everything concerning films in India including Films Division of the Central Government.

Film Advisory Board—Government of India have constituted in 1949 a Film Advisory Board to advise the Film Division of the Ministry of Information and Broadcasting. The Board will prereview all documentories and news reels produced by the Film Division and advise Government on such matters as may be referred to it.

Films Division—Initially started in 1942 under the name of Information Films of India for keeping the war effort, the organisation ceased to operate in 1946. It was revived in 1948 by our National Government. The Film Division which is a branch of the Ministry of Information and Broadcasting has its head quarters at Malabar Hill, Bombay. There are two distinct departments of the Films Division one is the documentary section, known as the *Documentary Films of India* and the other is the *Indian News Review*. The Indian News Review produces one newsreel of about 1,000 ft. every week. The Documentary Section is concerned with the production of short films of instructional, cultural and educational value. The documentaries and news-reels produced by the Film Division deals with various aspects of Indian life. History, culture, social and economic progress as well as current events are covered by these films.

The organisation consists of the following five units—*Documentary Section, Newsreel Section, Distribution Section, Public Relations Section* and *Administrative Section*. The films are produced in five languages—English, Hindustani, Tamil, Telegu and Bengali and are released simultaneously all over India. The exhibition of these films is made compulsory under a condition in the exhibitors' license and rental is charged approximately on the basis of 1 p.c. of the collections of cinemas.

Besides weekly news-reels released in India, a special edition of selected news items are compiled every month for non-commercial screening abroad. Apart from Indian news stories, the weekly newsreel includes foreign news items as well. These stories are received in exchange from U.S.A., U.K. France, Holland and other countries. Events in India thus get publicity abroad through the medium of films and television.

Within six years, India has earned a coveted place in the world of documentaries, Documentary Film Rajasthan has carried away highest trophy for documentaries at the International Film Exhibition at Venice 1951.

Censorship of Films—The system of film censorship in India was first evolved under the Indian Cinematograph Act, 1918. By the amendment of this Act in 1949, censorship was made a central subject. Government of India have taken over the film censorship which was States' subject from 15th Jan., 1951 and constituted a Central Board of Film Censors which is charged with the responsibility of formulating and enforcing an all-India policy for censorship of motion pictures produced or imported in the country. Besides Chairman, the Board consists of six honorary members. A representative of the film industry is also appointed by the Government.

The new department consists of a Central Board with its headquarters at Bombay and two regional officers in Calcutta and Madras. Each picture presented for censorship is examined by a committee, consisting of the Regional Officer and some advisers of the panel. If the picture is unanimously passed by this committee, a certificate is issued forthwith. If the decision of the examining committee is not unanimous, or if the producer is not satisfied with its decision the picture will be examined by the regional advisory panel. If the decision of this body is unanimous and acceptable to the producer, a certificate will be issued. However, if the decision of the committee is not approved by the producer the picture will be examined by the Central Board and a decision given. The producer may appeal against this decision also to the Government of India.

The Board issues two kind of certificates; one for films for unrestricted exhibition and the other for those to be restricted to adults only; they are respectively referred to as 'U' and 'A' certificates.

Taxation—The industry is now under the following taxations :—(1) Import duty of raw films and production and projection machinery, (2) Terminal or Octroi tax by most district municipalities, (3) Government electricity duty. (4) Entertainment tax, (5) Income tax, supertax and excess profits tax, (6) Advertisement tax on cinema publicity on screen levied by many municipalities. In case of some State governments, entertainment tax have been increased 50 per cent. in M.P., Bihar, by 25 and to 75 p.c. in Bengal.

Indian Industry To-day—The production of films has now levelled to an annual average of 250 to 280. On a conservative estimate, the daily attendance at Indian cinema houses averages between a million and a half to two million, while annual attendance is placed between 600 to 700 million people. The country has about 60 studies and 40 process laboratories. It is understood that the industry employs about 70,000 people. The total capital investment in the Indian film industry is of the order of Rs. 320 million. The working capital in addition, is estimated to Rs. 90 million. The annual revenue of the industry is placed at about Rs. 200 million.

Flm Federation of India—This has been established to promote commerce in general and in particular, to promote, protect and watch over the interests of the Indian Film Industry and persons there of ; to regulate their method of doing business, to maintain uniformity in rules, regulations and userges of film industry, to settle disputes by arbitration or otherwise ; to take all steps for promoting, supporting or opposing legislartion or executive action affecting the economic interest of the film industry and of those engaged thereon.

Some World Film Statistics—The United States leads the world with the greatest production of feature films. U. S. A. produces about 430 feature films a year, folowed by India with 250, Japan 123, France 106, Mexico 84 and Britain 71. But United States ranks only fifth in the number of cinema seats per one thousand head of population—Monaco 190, Australia 182, New Zealand 149, Britain 84, U.S.A. 83, India has a ratio of four seats to one thousand people and China, Indo-China and Ethiopia one for each one thousand (from "*World Communication*" complied by U.N.E.S.C.O. in 1950).

Indian Films Abroad—On the television circuits in the U.S.A., U.K., France and Cuba, India now is projected through her newsreels and documentaries.

Television apart, India is projected on the screen before a far wider audience, almost a world audience.

Not that Indian documentaries are produced only for the advantage of the world outside India. They circulate in a network of 3,200 Indian cinema houses.

India has been regularly participating since 1948 in International Film festivals held in various countries. The documentary film "Tree of Wealth" was awarded an "Honorary Appreciation Certificate" at the Fourth International Film Festival in Marianzke Lazne (Czechoslovakia) in 1949. At the Yorkton Film Festival in Yorkton (Canada) in October 1950, three films were awarded Certificates of Merit : (i) "Rajasthan Series I (Jaipur) :" (ii) "The Private Life of a Silkworm ;" and (iii) "Indian Minorities." The following year, "Rajasthan Series I" (Jaipur) won the first prize at the International Film Festival in Venice.

Feature films have also received recognition abroad. In 1949, "Kalpana" shared a prize for exceptional qualities with U.S. films, at the Second World Festival of Films and Fine Arts held at Brussels, Belgium. The film "Amar Bhoopali" won an award at the International Film Festival in Cannes (France) in 1952 for excellent sound recordings.

INDIA'S FILM INDUSTRY

1. *Capital Investment—*	Crores Rs.
Estimated total capital invested in film industry	42
Estimated capital invested in studios, laboratories, equipment, etc.	6
Estimated capital in production & distribution	10
Estimated capital invested (in total) cinema houses	26
2. *Annual output, production and distribution units—*	
Annual output (About)	250
No. of Studios	60
No. of laboratories (including those attached to studios	40
Total No. of Sound Stages	140
Average area per stage sq. ft.	5,500
Approximate No. of existing producers	300
Do. Do. existing distributors	600
3. *Exhibition—*	
No. of Cinemas over	3,500
(out of which 800 are touring or temporary)	3,500
Estimated total seating capacity of all cinemas	20,00,000
Average seating capacity per Cinema	630
No. of towns served by cinema	1,500
No. of cinema per million people	10
Estimated average daily attendance in cinema	25,00,000
No. of cinemas showing foreign films exclusively	50
4. *Employment—*	
In production	25,000
In distribution	7,000
In exhibition	50,000
In allied establishments	8,000
	90,000
5. *Costs, Incomes and Taxes—*	Lakhs
Average cost of production of feature film	4 to 5
Estimated total gross box office collections (including entertainment tax)	25
Estimated total entertainment tax paid	6
Estimated other taxes paid	6
Average time taken to complete a full length feature film is about	6-12 months
6. *Average Footage of feature films—*	
Picture produced in Calcutta or Bombay	12,000
Do. in Madras	15,000
7. *Imports of Raw films and Equipments—*	Lakhs. Rs.
Average annual import of raw films (200 million ft.)	140
Average annual import of sound equipments & accessories	12
Average annual import of projection equipments & accessories	50

PRODUCTION CENTRES AND SHARE OF PRODUCTION

	1946		1947		1948		1949	
	No.	P.C.	No.	P.C.	No.	P.C.	No.	P.C.
Bombay ..	150	75	195	69	171	65	174	60
Calcutta ..	23	11·5	46	16	52	20	82	28
Madras ..	22	11	37	13	41	15	33	12
Punjab ..	5	2·5	5	2	1	..	..	..

	1950		1951		Total	P.C.
	No.	P.C.	No.	P.C.	299	63
Bombay	144	60	118	53	299	20
Calcutta	51	21	45	21	237	17
Madras	46	19	58	26	11	..
Punjab	..	..	..	..	..	..

INDIAN TALKIE FEATURES 1931-51

	1931	1932	1933	1934	1935	1936	1937	1938	1939
Hindi ..	23	61	75	121	154	135	102	88	82
Gujarati ..	—	2	—	1	1	3	—	—	1
Marathi ..	—	8	6	11	9	6	11	14	12
Bengalee —	3	5	9	10	19	19	16	19	15
Tamil ..	1	4	7	14	38	38	37	39	35
Telegu ..	1	2	5	3	7	12	10	10	12
Kanarese ..	—	—	—	2	1	1	3	—	—
Punjabi ..	—	—	—	—	1	1	—	1	7
Malayalam	—	—	—	—	—	—	—	1	—
Others ..	—	1	1	2	3	2	—	—	1
	28	83	103	164	233	217	179	172	165

	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
Hindi	86	79	97	108	86	73	155	186	148	157	115	100
Gujrati	1	1	—	—	—	—	1	11	28	17	13	6
Marhati	10	14	13	5	4	—	2	6	7	15	19	16
Bengali	16	18	18	21	14	9	15	33	37	62	42	38
Tamil	36	34	19	13	13	11	16	29	32	21	19	26
Telegu	14	16	8	6	6	5	10	6	7	7	18	20
Kanarese	—	2	2	4	—	1	—	5	2	6	1	2
Punjabi	7	2	5	—	2	—	1	—	1	1	4	4
Malayalam	1	1	—	—	—	—	—	—	1	1	6	7
Others	—	3	1	2	1	—	—	7	2	2	4	2
	171	170	163	159	126	99	200	283	265	289	241	221

PERMANENT, SEMI-PERMANENT AND TOURING CINEMAS IN INDIA 1952

Bombay Circuit	*Stations*	*No. of Cinemas*
Permanent	301	619
Touring	—	50

Central Circiut		
Permanent	272	501
Touring	—	30
North Circiut		
Permanent	162	385
Touring	—	20
Bengal Circuit		
Permanent	259	504
Touring	—	25
South Circuit		
Permanent	493	924
Touring	—	475
Total, Permanent	1487	2933
Total, Touring	—	600
Grand Total	—	3533

CINEMA CIRCUITS

Central Circuit—M.P., Madhya Bharat, Rajasthan, Ajmer, Bhopal, Vindya Pradesh and East & West Khandesh, Districts of Bombay Presidency.

North Circuit—Delhi, U.P., Punjab, Pepsu, Himachal Pradesh, Jammu & Kashmir and Nepal.

Bengal Circuit—West Bengal, Bihar, Assam, Orissa, Tripura, and Berhampur (Ganjam).

South Circuit—Madras, Travancore, Cochin, Hyderabad and Coorg.

Bombay Circuit—Bombay, Saurashtra and Kutch.

IMPORTS OF CINEMATOGRAPH FILMS AND EQUIPMENT

(*Figures in Lakhs*)

	Footage.	*Value.*	*Import duty.*	*Footage.*	*Value.*	*Import duty.*	*Sound-recording equipment and accessories.*	*Projection equipments and accessories.*
	Raw Films			Exposed Films				
		(Rs.)	(Rs.)		Rs.	(Rs.)	(Rs.)	(Rs.)
1945-46	808.94	29.11	9.71	161.88	45.28	15.12	15.37	19.10
1946-47	1286.23	54.11	18.83	151.15	24.60	22.62	23.17	46.70
1947-48	1742.00	79.96	25.09	150.88	16.98	29.01	84.64	61.51
1948-49	1564.16	76.96	24.63	123.91	31.52	20.00	24.53	37.14
1949-50	1787.50	95.30	28.97	145.37	35.99	18.25	9.53	61.94
1950-51	2085.38	125.50	32.47	145.37	35.79	18.63	9.53	61.94
1951-52	1981.74	135.55	..	105.96	28.01	—	17.56	53.79

WORLD FILM PRODUCTION AND THEATRES

Country	*No. of feature films*	*No. of Cinemas*	*Annual attendance (millions)*
U.S.A.	450	20,239	3360
India	250	3,500	730
Japan	156	2,225	610
Italy	120	7,500	579
France	110	5,200	370
Germany	89	5,832	..
U.K.	87	4,775	1456
Mexico	84	1,726	108
Philippines	84	700	25
Argentina	44	1,881	110
Egypt	50	226	42
Spain	40	3,583	312
Sweden	34	2,484	50

(*Source*—UNESCO)

FACTS OF CINEMA IN INDIA

1896 First exhibition of cinema in India by Lumiere Brothers, July 7, 1896.

1907 First cinema house was opened in Calcutta by late J. F. Madan.

1913 D. Phalke of Bombay is the first Indian to produce first Indian film. *Harischandra* released at Coronation Cinema, Bombay April, 1913.

1917 First Indian film produced in Bengal is *Nala Damayanti* by J. F. Madan.

1918 Indian Cinematograph Act passed.

1920 Censorship of films started in India at Calcutta, Bombay and Madras.

1921 First picture produced in South India is *Bhishma Pratigna*, by Star of the East Film Co.

1922 Entertainment tax introduced in Bengal.

1927 Government of India appoints a Cinematograph Enquiry Committee.

1929 First talkie exhibited in India was Universal's *Melody* of *Love* at Elphinstone Picture Palace, Calcutta.

1931 *Alam Ara* is the first Indian talkie by Imperial Film Studio, Bombay released on 14th March, 1941. The second talkie was *Shirin Farhad* by Madan Theatre, Ltd., Calcutta.

1931 Prabhat Studio's *Sairendhri* is the first Indian colour film though it was coloured in Germany. First cine-colour picture done in India is was Imperial's *Krishan Kanya*.

Karma is the first Indian-English film (talkie) by the late Himansu Rai, the founder of Bombay Talkies but produced mainly in England under European supervision.

1939 Silver Jubilee of the Film Industry in India.

1940 *Court Dancer* is the first full length sound Indian English film made in this country under purely Indian supervision.

1943 Information Films of India set up by the Government of India.

1949 Appointment of the Film Enquiry Committee by the Government of India.

1949 Censorship of films was included in the Union List in the new constitution.—By amendment of the cinematograph act pictures were classified 'A' (for adults only) and 'V' (universal exhibition).

1951 Central Board of Censors at Bombay was established from 15th January.

1952 First International Festival Sponsored by the Government of India was inaugurated in Bombay on January 24, 1952—A goodwill delegation from India visited U.S.A. on invitation by U.S. Industry—Bengali film *Babla* was awarded medal for the "struggle for social progress" prizes at the Czech International Festival.

LEADING INDIAN PRODUCERS

Bombay

Wadia Movietone.
Shorey Pictures.
Pancholi Products.
Hindustan Chitra.
M. & T. Films.
Verma Films.
Rajkamal Kalamandir.
Bombay Talkies.
Kardar Productions.
Sri Ranjit Movietone.
Filmistan.
Film Arts.
Bombay Cinetone.
Famous Pictures.
Prakash Pictures.
Mahboob Productions.
Asoke Kumar Productions.
Atre Pictures.
Basant Pictures.
Chandrakala Pictures.
Filmkar.
Jayant Desai Productions.
Kuldip Pictures.
Nitin Bose Ltd.
R. K. Films.
Nav Ketan.
Jagat Pictures.
Mohan Pictures.
National Film Circuit.
Nigaristan.
Rup Kamal Chitra.
Habib Productions.
Talwar Films.
Fazli Brothers.
Hira Films.
Minerva Movietone.

Calcutta

Aurora Film Corpn.
Chitra Bharati.
Emer Pictures.
India United Picts.
National Progressive Pictures.
Production Syndicate.
S. B. Pictures.
Sri Bharat Laxmi Pictures.
Srimati Pictures.
Sudhir Bandhu Productions.
Vasumitra.
New Theatres Ltd.
Radha Films.
Indian National Art Pictures.
M. P. Productions.
Chitramaya.

Poona

Prabhat Film Co.
Ranjit Movietone Co.
Makaranand Films.
Mangal Pictures.
Navayug Chitrapat.

Madras

A. V. M. Productions.
Bharani Pictures.
Jupiter Pictures.
Prakash Productions.
Prativa Productions.
Ragini Films.
Rohini Pictures.
Shobhanachala Picts.
Vauhini Productions.
Gemini Studios.

FILM STUDIOS IN INDIA

Bombay

Bombay Talkies.
Famous Cine Laboratories.
Filimistan Stuidos.
Jupiter Studios.

Kardar Studios.
Prakash Studios.
Raj Kamal Kalamandir.
Central Studios.
M. & T. Studios.
Sri Ranjit Movietone Co.
Basant Pictures Studios.
Eastern Studios.
Famous Pictures.
Modern Studios.
Mohan Pictures.
Jyoti Studios.
Sri Sound Studios.
Supreme Pictures.

Calcutta

Associated Production Ltd.
Aurora Film Corporation.
Bengal National Studios.
Calcutta Movietone Studios.
East India Film Ltd.
Eastern Talkies.
Indraloke Studios.
Indrapuri Studios.
National Sound Studios.
New Theatres Ltd.
Radha Films Studios.
Rupasree Ltd.
Sri Bharat Lakshmi Studios.
Technician's Studios.

LEADING DISTRIBUTORS

Bombay

India Film Ex.
Eastern Film Ex.
Kapurchand Ltd.
Western India Theatres Ltd.
Shivsarandass Kidernath.
Novelty Pictures.
Model Pictures.
Saroj Pictures.

Calcutta

Associated Distributors Ltd.
Aurora Film Corporation Ltd.
De Luxe Film Distributors.
Dossani Film Corporation.
Empire Talkie Distributors.
Golden Film Distributors.
Moviestan Ltd.
Rajashri Picture Ltd.
Prima Films.

Delhi

Goodwill Pictures.
Rajshri Pictures.
Goodluck Picture.
Associated Pictures.
Delhi Film Corporation.
Chitrabharati.
Desai & Co.

FOREIGN FILM STUDIOS

Universal (U.S.A.).
Metro-Goldwyn-Meyer (U.S.A.).
R.K.O. Radio Pictures (U.S.A.).
Warner Bros. (U.S.A.)
20th Century Fox (U.S.A.).
Columbia (U.S.A.).
United Artists U.S.A.
Gainsborough Pictures (English).
Two Cities Films (English).
London Film Productions (English).
British International Pictures (English).
Arthur Rank Productions (English).
Ealing Studios (English).

ACADEMY AWARDS FOR PRODUCTION

'Oscar' is the supreme annual award of the *American Academy of Motion Picture Arts and Sciences.* These coveted Statuettes were first presented on 26th May, 1929, for the leading men and women in various branches of picture making industry.

Winning Film	*Actor of the Year*	*Actress of the Year*
1928 Wings (*Paramount*)	Emil Jennings	Janet Gaynor
1929 Broadway Melody (*M. G. M.*)	Warner Baxter	Mary 'Pickford

1930 All Quiet on the Western Front (*Universal*)	George Arliss	Norma Shearer
1931 Simarron (*R.K.O.*)	Leonel Barymore	Marie Dresler
1932 Grant Hotel (*M.G.M.*)	Fredric March	Helen Hayes
1933 Cavalcade (*Fox*)	Charles Laughton	Katherine Hepburn
1934 It happened one night (*Columbia*)	Clark Gable	Claudette Colbert
1935 Mutiny on the bounty (*M.G.M.*)	Victor McLaglen	Bette Davies
1936 Great Ziegfeld (*M.G.M.*)	Paul Muni	Luise Rainer
1937 Life of Emile Zola (*Warner*)	Spencer Tracy	Luise Rainer
1938 You can't take it with you (*Columbia*)	Spencer Tracy	Bette Davies
1939 Gone with the Mind (*Selznick*)	Robert Donat	Vivien Leigh
1940 Rebecca (*Selznick*)	James Stewart	Ginger Rogers
1941 How Green was My Valley (*20th Century*).	Gary Cooper	Joan Fontaine
1942 Mrs. Miniver (*M.G.M.*)	James Cagney	Greer Garson
1943 Casablanca (*Warner*).	Paul Lukas	Jennifer Jones
1944 Going My Way (*Paramount*)	Bing Crosby	Ingrid Bergman
1945 Lost Week End (*Paramount*)	Ray Milland	Joan Crawford
1946 Best Years of Our Lives (*R.K.O.*)	Frederic March	Oliva de Havilland
1947 Gentleman's Agreement (*20th century*)	Sir L. Olivier	Loretta Young
1948 Hamlet (*Arthur Rank*)	Ronald Colman	Jane Wyman
1949 All the King's Men (*Columbia*)	Broderick Crawford	Oliva de Havilland
1950 All About Eve (*20th Century-tox*).	Jose Ferrer	Judy Holliday
1951 An American in Paris (*M.G.M.*)	Humphery Bogart	Vivien Leigh

1952 AWARDS

Best Movie of 1952
According to film Daily Poll of U.S. film critics, reviewers and commentators—
High Noon, followed by *Quietman*, *Greatest show on earth*, *African Queen*, *Ivanhoe*.

British Film Academy Awards for 1952
Best Movie and Best Br. Movie—*Breaking the Sound Barrier.*

BANKS IN INDIA

There was no comprehensive legislation regarding joint-stock banks in India until the passage of the Banking Companies Act which came into force on the 16th March, 1949, and now extends to the whole of India. It does not however apply to co-operative banks and only in part to the Imperial Bank of India which was constituted under a special Act passed in 1920.

Under the Act all joint-stock banks operating in India are to be licensed by the Reserve Bank of India which may require to be satisfied that the applicant bank is in sound position, and, in case of foreign bank, that the law of the country in which it is registered does not discriminate in any way against banking companies registered in India. It lays down certain requirements in respect of the assets to be maintained by all banking companies and the paid-up capital and reserves of Indian banks. It prohibits inter-locking directorates among banking companies, their transaction of any but banking business, the employment of managing agents and the grant by a bank of unsecured loans to any director or any firm in which a director is interested. The Reserve Bank is given comprehensive powers of control over joint-stock banking system in India; it may give general or particular directions in regard to the lending policy of any bank or banks prohibitary specified banking transaction, inspect any bank and call for returns. Its sanction is required for opening of new or the transfer of old branch offices and is given certain powers in respect of the voluntary winding-up or amalgamation of banking companies.

Classes of **Banks in India**—The banks in India are generally classified under the following heads—(1) Reserve Bank of India (2) Indian banks comprising (*a*) Imperial Bank of India and other Indian joint stock banks (*b*) Indian non-scheduled banks, *i.e.*, Indian joint stock banks other than those included in the second Schedule to the Reserve Bank of India Act and (*c*) Indian Co-operative Banks registered under the laws of the States where they are situated and (3) Foreign banks comprising scheduled and non-scheduled banks whose registered offices are located outside the Indian Union.

Scheduled Banks—Under the Reserve Bank Act of India, the banks in India have been classified into *scheduled* and *non-scheduled* Banks. Banks which carry on the business of banking in any state to which the Reserve Bank of India Act extends and which (*a*) have paid up capital and reserves of an aggregate, real or exchangeable, value of not less than Rs. 5 lakhs and (*b*) are companies as defined in Section 2(2) of the Indian Companies Act 1913 or corporations or companies incorporated by or under any law in force in any place outside India, and (*c*) satisfy the Reserve Bank that their affairs are not being conducted in a manner detrimental to the interest of their depositors, are eligible for inclusion in the Second Schedule to the Reserve Bank of India Act, 1934 and when so included are known as scheduled banks.

Non-Scheduled Banks—The non-scheduled banks have been divided into four classes; A 2 Banks or banks which have paid-up capital and reserves of Rs. 5 lakhs and above each, but which have not been included in the Second Schedule to the Reserve Bank of India Act; B Banks or banks each having paid up capital and reserves between Rs. 1 lakh and Rs. 5 lakhs; C banks or banks each having paid-up capital and reserves between Rs. 50,000 and Rs. 1 lakh; and D Banks or banks each having paid-up capital and reserves of less than Rs. 50,000. Banking Companies Act of 1949 has given direct control to the Reserve Bank over all banks operating in India, scheduled or non-scheduled.

Reserve Bank & the Banking Companies Act—The Banking Companies Act of 1949 centralises all supervision as well as control over the banks in the hands of the Reserve Bank of India. The main duties imposed upon the Reserve Bank in this respect may be classified as follows: (*a*) Supervision and inspection of banks, (*b*) the licensing of banks and control over opening of branches, (*c*) the examination and sanction of schemes of arrangement and amalgamations, (*d*) the liquidation of banking companies, (*e*) the receipt and scrutiny of prescribed returns and (*f*) advising banks generally and helping them in times of emergencies.

Co-operative banks—comprise State and Central co-operative banks and registered non-agricultural (urban) Co-operative Credit Societies with limited liability, each having minimum paid-up capital and reserves of Rs. 1 lakh. They are sub-divided into two classes, namely, A banks or banks with capital and reserves of Rs. 5 lakhs and above each and B banks or banks with capital and reserves ranging between Rs. 1 lakh and Rs. 5 lakhs each. They are governed by the Indian Co-operative Societies Act of 1912 and in some cases also by other legislation. They operate mainly in rural areas and are subject to considerable control by the state registrars of co-operative societies.

(1) RESERVE BANK OF INDIA

Reserve Bank was established in India from the 1st of April, 1935 under the Reserve Bank of India Act, 1934 as shareholders' bank but was nationalised from 1st January, 1949 by the Reserve Bank of India Amendment Act of 1948.

Nationalisation of the Bank—In 1948, the Reserve Bank of India was nationalised. Under the Reserve Bank of India (Transfer to public ownership) Act, 1948, all shares in the capital of the Bank were transferred to the Central Government on 1st January, 1949 with due compensation to the shareholders.

Functions of the Reserve Bank—(1) It has been given the sole right to issue paper currency notes. For this purpose, it is required to keep a reserve of 40 p.c. in gold and sterling against the total value of notes issued by it, remaining sixty per cent is to be kept in rupee securities, etc.

(2) It acts as the banker to the government. The central government and state govements deposit their funds with Reserve Bank. It should be noted that Reserve Bank does not pay any interest on its deposits. The Bank also grants loans (known as ways and means advances) to the government, repayable within a short period. It also manages the public debts of the governments, issue these loans and repays them on the due date.

(3) It also acts as a banker to other joint stock banks of the

country. Those banks whose paid-up capital and reserve amount to Rupees Five Lakhs are to be known as "scheduled banks." In return Reserve Bank grants them loans whenever they fall short of cash.

(4) It keeps the rate of exchange between the rupee and the Sterling fixed at 1s. 6d. per rupee and buys and sells sterling or other foreign currencies in exchange of rupees at that rate.

(5) It manages clearing house operations, collects and publishes banking and financial statistics.

(6) By the Banking Companies Act 1949 Reserve Bank issues and cancels licences to banks in India, and inspects their accounts.

Management of the Bank—The general superintendence and direction are entrusted to a Central Board consisting of a Governor and two Deputy Governors appointed by the Central Government and ten directors and one government official, all nominated by the Central Government. The Directors are now to hold office for a period of four years. A Local Board has been constituted for each of the four areas consisting of five nominated members to represent territorial and economic interests.

Agricultural Credit Department—In fulfilment of its statutory requirement, the Reserve Bank of India, opened a *Agricultural Credit Department*, the functions of which are twofold (1) maintenance of an expert staff to study all questions of agricultural credit, which is available for consultation by all public authorities, provincial co-operative banks and other banking organisations (2) co-ordination of the operations of the bank in connection with agricultural credit.

LIABILITIES AND ASSETS OF RESERVE BANK OF INDIA

(1) Issue Department

(In Lakhs of Rupees)

30th June	*Notes held in Banking Dept.*	*Notes in circulation*	*Total liabilities (total notes issued) or Assets*	*Gold coin and bullion held in India*	*Foreign Securites*
1949	32,69	1,153,75	1,486,44	40,02	6,85,34
1950	36,61	1,168,53	1,205,14	40,02	6,38,15
1951	34,84	1,257,48	1,292,32	40,02	6,78,15
1952	34,40	1,129,48	1.163,88	40,02	5,83,15

30th June	*Total gold coin & bullion & foreign securities*	*Rupee coin*	*Gold of India rupee securities*	*P. C. of gold coin & bullion & foreign securities to total liabilities*
1949	725,36	47,36	413,72	61·14
1950	678,17	55,30	471,67	56·27
1951	718,17	57,52	516,63	55·57
1952	623,17	76,08	464,63	53·54

(*Statistical Tables relating to banks in India* 1952)

LIABILITIES AND ASSETS OF THE RESERVE BANK OF INDIA

(*Issue and Banking Departments combined—Lakhs of Rupees*)

	Liabilities			Assets
	Capital & Reserves	*Notes in circulation*	*Total Deposits*	*Total liabilities or Assets*
1948-49	10,10	1,169,35	332,29	1,554,25
1949-50	10,10	1,163,52	291,44	1,502,98
1950-51	10,10	1,247,41	320,03	1,612,27
1951-52	10,10	1,141,11	318,11	1,530,94
1952-53	10,10	1,133,12	264,96	1,455,80

(*Report on Currency & Finance* 1952-53)

(ii) Banking Departments

(*In Lakhs of Rupees*)

30th June	*Paid-up Capital & Reserves*	*All Deposits (total)*	*Bills payable*	*Other liabilities*	*total liabilities or assets*	*Cash*
1949	10,00	274,10	3,27	7,50	294,88	32,83
1950	10,00	271,89	3,81	12,14	297,83	36,74
1951	10,00	310,00	2,37	9,82	332,19	34,98
1952	10,00	241,54	3,31	8,01	262,87	34,56

30th June	*Bills purchased & discounted*	*Balances held abroad*	*Loans & Advances to Governments*	*Loans & advances to others*	*Investments*	*Other assets*
1949	2,85	135,68	10,72	7,32	103,45	2,03
1950	1,76	189,25	93	10,01	57,05	2,10
1951	2,09	178,35	7,50	18,71	88,12	2,44
1952	10,19	98,24	1,58	28,28	86,94	3,08

(2) IMPERIAL BANK OF INDIA

Imperial Bank of India was established in 1921 after amalgamation of three Presidency Banks of Bengal, Bombay and Madras originated in the days of East India Co. Under Imperial Bank Act of 1920, the capital of the Bank consists of 750,000 shares of Rs. 500 each fully paid up transferred over from the three Presidency Banks and an additional 1,500,000 shares of Rs. 500 each on which Rs. 125 per share has been paid up, making in all the present authorised capital of Rs. 11,2500,000 of which Rs. 5,62,50,000 has been paid up.

The Bank has been authorised under the Act to have three local Head Offices at Bombay, Calcutta and Madras where three separate register of its shareholders are kept.

The general superintendence of the affairs of the Bank is entrusted to a Central Board of Directors. Besides Central Board, there are three Local Boards at Bombay, Calcutta and Madras.

Bank has entered into an agreement with the Reserve Bank of India under the terms of which it will act as the sole agent of the Reserve Bank at every place in India where there is a branch of the Imperial Bank and where there is no branch of the Reserve Bank.

The position of the Imperial Bank is as follows :—

LIABILITIES AND ASSETS OF THE IMPERIAL BANK OF INDIA

(In Lakhs of Rupees)

	Paidup Capital	*Reserves*	*Deposits*	*Cash in hand & at Banks*	*Investments (Govt. Securities & Others)*	*Loans & Advances*	*Bills discounted & purchased*	*Net profit*	*No. of offices*
1946	5,63	6,17	271,67	42,46	154,53	83,26	11,02	1,14	358
1947	5,63	6,25	286,59	42,89	164,20	77,07	12,08	1,23	362
1948	5,63	6,28	280,29	43,68	161,25	85,74	12,26	1,20	367
1949	5,63	6,30	250,46	66,89	106,85	86,12	5,69	1,23	377
1950	5,63	6,33	231,37	28,18	121,55	94,44	7,51	1,25	382
1951	5,63	6,35	230,91	29,57	85,16	133,66	8,81	1,30	393
1952	5,63	6,35	205,85	25,45	97,15	107,12	6,05	1,33	410

(3) EXCHANGE BANKS

The main business of the Exchange Banks is financing the foreign trade of India. The Exchange Banks are all incorporated outside India. They purchase bills in foreign currency, grant loans against shipping and other documents. They also play some little part in the financing of inland trade mainly for the movement of goods for export or of goods imported. But now they are extending their operations in the interior of the country and are receiving deposits also on saving and fixed accounts and are engaged in financing the internal trade of India. There are at present no qualitative differences in the modes of operations between Indian joint-stock banks and foreign exchange banks save and except that latter are incorporated outside.

The Exchange Banks furnish the immediate link with the outside world of trade and commerce. Primarily the exchange banks specialise in the finance of foreign trade and their beginning dates back to the Oriental Banking Corporation in 1842.

The Exchange Banks are—National Bank of India, Lloyds Bank, Chartered Bank of India, Australia and China, Grindlays Bank, Hongkong and Shanghai Banking Corporation, Mercantile Bank of India, Eastern Bank, National City Bank of New York, Netherlands Nationale Handelsbank N. V. Netherlands Trading Society, American Express Co., Banco Nacional Ultramarino, Comptoir National D'Escompte de Paris, Bank of China.

FOREIGN SCHEDULED BANKS

(*In Lakhs of Rupees*)

	No. of Banks	*All deposits*	*Cash in hand & banks*	*Investments (Govts. Securities & others)*	*Loans & Advances*	*Bills discounted & purchased*	*Net profits*
1946	16	180,88	23,71	..	63,69	7,58	..
1947	16	173,53	31,14	..	86,87	10,68	..
1948	16	166,96	17,77	..	105,23	10,38	..
1949	16	165,88	19,39	50,28	105,61	16,49	2,24
1950	16	174,16	19,13	49,61	112,73	23,01	2,09
1951	16	169,88	24,83	46,29	148,69	25,84	3,14
1952	15	176,60	16,43	44,38	131,01	19,31	1,83

(4) JOINT STOCK BANKS

All the Indian Joint Stock Banks are registered under the Indian Companies Act.

The Joint Stock Banks are sub-divided into four classes, namely (*a*) those with a paid-up Capital and Reserve of Rs. 5 lakhs and over (*b*) those with paid-up Capital and Reserves between one lakh and less than Rs. 5 lakhs and two other divisions with less Capital and Reserves.

Joint Stock Banks are mainly commercial Banks. Indian Joint Stock Banks provide India's internal banking facilities. They receive deposits or mortgages, discount local bills, open cash credit accounts, advance loans against stock exchange securities, grain or cloth, buy and sell shares and transact other banking business. They keep the valuables of their customers in safe custody and render other services to their customers. The agricultural business of these banks is small and is generally confined to big landholders and planters.

LIABILITIES & ASSETS OF THE SEVERAL CLASSES OF BANKS (TOTAL BUSINESS)

(*In Lakhs of Rupees*)

1. *SCHEDULED BANKS* (Imp. Bank, other Ind. Scheduled Banks & Foreign Scheduled Banks)

	No. of banks	*Paid-up Capital*	*Reserves*	*Total Deposits*	*Cash in hand*	*Cash in banks*	*Invest-ment (Govt. Secu-rities)*
1948	95	36,93	25,76	1,042,16	63,80	109,98	396,19
1949	94	36,69	26,35	925,60	63,92	114,87	358,10
1950	91	35,85	26,65	928,23	49,75	88,72	364,51
1951	92	34,44	27,33	918,13	46,81	93,33	299,15
1952	91	33,71	26,65	891,97	39,57	85,74	319,10

	Investments (others)	*Loans & Advances*	*Bills dis-counted & purchased*	*Net profit*	*No. of offices*
1948	44,70	442,07	49,04	6,07	2,963
1949	40,89	418,00	46,97	7,75	2,852
1950	46,60	440,40	65,04	7,43	2,765
1951	49,58	445,14	73,78	9,08	2,646
1952	49,30	474,01	60,77	7,26	2,646

2. *NON-SCHEDULED BANKS*

(including foreign non-scheduled banks)

	No. of banks	*Paid-up Capital*	*Reserves*	*Total Deposits*	*Cash in hand*	*Cash in banks*
1948	544	9,23	3,53	76,07	7,67	5,69
1949	526	9,72	3,87	71,87	7,08	4,88
1950	514	10,26	3,91	73,67	6,88	4,68
1951	474	9,39	3,98	69,99	7,71	3,55
1952	443	9,64	4,25	64,72	6,35	3,90

	Invest-ment (Govt. Securi-ties)	*Invest-ments (others)*	*Loans & Ad-vances*	*Bills dis-counted & pur-chased*	*Net profit*	*No. of offices*
1948	18,58	5,51	49,98	2,69	58	1,711
1949	17,62	4,53	50,59	2,27	62	1,589
1950	24,44	4,40	45,77	1,87	68	1,545
1951	22,79	3,83	45,79	1,69	63	1,469
1952	21,10	3,81	42,87	1,69	48	1,321

3. *CO-OPERATIVE BANKS*

	No. of banks	*Paid-up Capital*	*Reserves*	*Deposits*	*Cash in hand*	*Cash in banks*	*Invest-ments*
1947-48	323	6,04	7,03	72,04	2,53	6,04	29,16
1948-49	361	7,08	7,71	87,85	3,33	5,20	28,24
1949-50	391	8,06	8,51	90,43	3,05	8,76	30,24
1950-51	415	9,20	9,87	101,27	3,80	7,94	30,79
1951-52	445	10,55	10,16	105,66	3,60	7,79	30,32

	Loans & Advances etc.	*Net profit*	*No. of offices*
1947-48	43,43	75	597
1948-49	61,15	91	644
1949-50	61,26	94	733
1950-51	73,47	1,10	819
1951-52	82,92	1,25	872

LIABILITIES & ASSETS OF INDIAN JOINT STOCK BANKS 1952

(*In Lakhs of Rupees*)

A. Scheduled Banks

No. of Banks	*Capital*	*Reserves*	*Deposits*	*Net profit or loss (—)*	*Total liabilities or assets*	*Cash in hand*	*Cash in Banks*
76	33,71	26,65	715,37	5,44	892,56	37,01	71,87

Investment in Govt. securities	*Investments (Others)*	*Loans & Advances*	*Bills discounted & purchased*	*No. of Offices*
275,77	48,26	343,00	41,46	2,581

B. Non-Scheduled Banks

(*In Lakhs of Rupees*)

No. of Banks	*Capital*	*Reserves*	*Deposits*	*Net profit or loss (—)*	*Total liabilities or assets*	*Cash in hand*	*Cash in Banks*
441	9,63	4,25	64,70	48	85,74	6,34	3,89

Investment in Govt. securities	*Investment (Others)*	*Loans & Advances*	*Bills discounted & Purchased*	*No. of Offices*
20,85	3,81	42,84	1,69	1,319

(*Statistical Reports relating Banks in India*, 1952)

EARNINGS & EXPENSES OF INDIAN SCHEDULED BANKS

(In Lakhs of Rupees)

	No. of Banks	Earnings	Expenses	Disposal of net profits & accumulated surpluses	Allocation of sums available
1948	71	29,73·4	29,73·4	9,37·5	9,37·5
1949	73	29,62·4	29,62·4	9,01·6	9,01·6
1950	71	29,10·2	29,10·2	7,43·6	7,43·6
1951	72	32,28·0	32,28·0	10,41·2	10,41·2
1952	73	34,38·0	34,38·0	8,16·1	81,6·1

EARNINGS AND EXPENSES OF EXCHANGE BANKS

(In Lakhs of Rupees)

	No. of Banks	Earnings	Expenses	Disposal of net profits & accumulated surpluses	Allocation of sums available
1949	15	11,29·4	11,29·4	4,61·8	4,61·8
1950	15	9,46·9	9,46·9	3,41·4	3,41·4
1952	15	13,06·5	13,30·5	5,61·9	5,61·9
1952	14	13,30·5	13,30·5	3,99·6	3,99·6

EARNINGS & EXPENSES OF INDIAN NON-SCHEDULED BANKS

(In Lakhs of Rupees)

	No. of Banks	Earnings	Expenses	Disposal of net profits & accumulated surpluses	Allocation of sums available
1948	59	2,07·1	2,07·1	50·4	50·4
1949	69	2,16·8	2,16·8	30·7	30·7
1950	64	1,84·6	1,84·6	6·2	6·2
1951	59	1,93·0	1,93·0	15·3	15·3
1952	61	2,10·6	2,10·6	14·2	14·2

(5) CO-OPERATIVE BANKS

The Co-operative Banking organization owes its origin to the Co-operative Credit Societies Act of 1904. This Act was further amended by the Act of 1912. Under Co-operative Societies Act, all classes of registered societies whether in themselves primary units or federation of constituent societies are spoken as 'Societies.' In actual practice, however, the primary units are in some provinces known as banks and in others as societies.

The Co-operative Banking system consists of the Provincial Bank at apex, the affiliated Central Banks, and lastly the primary societies affiliated to the Central Banks. According to the rules framed under the Act, these banks can not generally lend to non-members.

The functions of Co-operative Banks are as follows :—

(1) Attracting deposits from money-lenders and professional classes. (2) Lending money to the primary co-operative societies. (3) Taking away the excess fund of a Co-operative Society and utilising it for making up the deficiency of others. (4) Supervising and guiding the actions of affiliated Societies.

LIABILITIES AND ASSETS OF INDIAN CO-OPERATIVE BANKS

CLASS *'A'—(Capital and Reserve of Rs. 5 lakhs and above)*
(In 000 of Rs.)

	No. of Banks	*Paid-up Capital*	*Reserves & other Funds*	*Deposits & loans held*	*Total Liabilities or assets*
1947-48	56	3,31,37	4,21,55	49,49,57	60,64,06
1948-49	63	4,01,35	4,64,70	62,48,65	75,69,75
1949-50	72	4,76,99	5,22,20	64,23,45	77,76,62
1950-51	79	5,65,84	6,50,18	74,79,74	93,55,35
1951-52	90	6,80,35	6,46,59	79,25,68	1,04,12,21

	Loans outstanding	*Cash in hand & Banks*	*Investments & Securities*	*Premises & immoveable properties*	*Net Profit*
1947-48	28,00,19	5,36,27	21,51,42	34,74	44,99
1948-49	42,17,93	5,33,35	19,90,69	34,33	58,64
1949-50	42,45,02	7,37,67	22,47,48	47,38	56,73
1950-51	53,67,66	6,80,04	23,87,94	47,97	69,41
1951-52	62,22,94	6,82,82	23,91,58	68,71	80,79

CLASS 'B'—*(One Lakh and 5 Lakhs)*
Capital and Reserves between

	No. of Banks	*Paid-up Capital*	*Reserves & other Funds*	*Deposits & loans held*	*Total Liabilities & assets*	*Cash in hand & Banks*
1947-48	267	2,72,96	2,80,72	22,53,82	30,12,99	3,20,23
1948-49	298	3,07,15	3,05,71	25,35,58	33,50,20	3,18,73
1949-50	319	3,28,65	3,28,67	26,20,06	34,91,01	4,42,82
1950-51	336	3,53,75	3,36,88	26,46,63	35,43,51	4,93,23
1951-52	355	3,74,66	3,68,56	26,40,11	36,40,45	4,56,51

	Loans outstanding	*Investments*	*Premises & immoveable properties*	*Net Profit*
1947-48 ..	15,43,48	7,65,39	43,71	30,27
1948-49 ..	18,96,66	8,32,73	47,77	32,20
1949-50 ..	18,81,11	7,77,00	54,25	37,36
1950-51 ..	19,79,30	6,90,70	51,81	41,23
1951-52 ..	20,69,26	6,40,47	64,57	44,00

(Source : *Statistical Tables relating Banks in India,* 1952)

(6) INDIGENOUS BANKS

The indigenous bankers are those who carry on banking business according to traditional Indian methods. They are known as *Shroffs, Sahukers, Nidhis, Chettiyars.* The Indian Central Banking Enquiry Committee defines an indigenous banker or bank as an individual or private firm receiving deposits and dealing in hundis or lending money. Those who do not receive deposits were to be known as money lenders. Their business is generally a family concern. They supply their own capital. Some of them also accept deposits from the public. Their main function is to grant loans against the security of gold or ornaments, government securities etc. They grant loans to village money-lenders, *banias* and small artisans. They finance movement of agricultural crops from one part of the country to another by drawing hundis or internal bills of exchange. They also discount hundies. Indigenous bankers are generally divided into three categories—(1) Those who confine their business in banking proper (2) those who are principally traders or merchants but employ surplus funds in banking business and (3) those who are both bankers and traders and cannot be easily classified as principally bankers or principally traders. The indigenous bankers are found to render valuable services in connection with financing of internal trade and middle sized and small industries and inland remittance works.

(7) LAND MORTGAGE BANKS

Royal Commission on Agriculture in India in 1928 and Banking Enquiry Committee in 1930 recommended that Land Mortgage Banks based on Co-operative principles are desirable in many parts of India. The principal objects of these banks should be the redemption of the land and houses of the agriculturists and liquidation of old debts. Other objects are improvements of land and of methods of cultivation and the building of houses of agriculturists and purchase of land in special cases.

Land Mortgages Banks have been started under the auspices of the Co-operative movement in the Punjab, Madras, Bombay, Bengal and Assam, but the beginning is very small.

BANKING COMPANIES ACT

The Act was passed on Feb. 17, 1949 and applied to all banking companies except co-operative banks. Banking has been defined as "the accepting, for the purpose of lending or investment, of deposits of money from the public, repayable on demand or otherwise, and withdrawable by cheque, draft, order or otherwise.

Prior to March 1949, any company which used as part of its name the word 'bank' 'banker' was deemed to be, according to the Indian Companies Act 1913, as amended in 1942, a banking company, irrespective of whether or not banking was its principal business. Under the Banking Companies Act 1949, the business which a banking company may transact has been defined and minimum paid up capital and reserves varying with the geographical coverage of a banking company, have been prescribed. The minimum paid-up capital and reserves required of a banking company having only one office outside the city of Bombay or Calcutta, has been fixed at Rs. 50,000. A banking company is required to use as part of its name the word 'bank', 'banker' or 'banking' and a non-banking company is prohibited from using any of these words in its name.

All banks are to be licensed. The licence is to be issued by the Reserve Bank which may require to be satisfied that the applicant bank is in a sound financial position, and further in respect of a foreign bank, that the law of the country in which it is incorporated does not discriminate in any way against banking companies registered in India.

Scheduled Banks continue to be required to keep minimum reserves with the Reserve Bank of India and to submit weekly returns under Reserve Bank of India Act, 1934. All banks other than scheduled banks are now required to maintain in cash with them or with the Reserve Bank, 2 p.c. and 5 p.c. of their time and demand liabilities respectively and to submit monthly returns giving details of cash held and time and demand liabilities as on each friday of the month.

All banking companies are required, two years after commencement of this Act, to maintain at least 20 p.c. of their demand and time liabilities in India in cash, gold or unencumbered approved securities, valued at a price not exceeding the current market price. They have also to maintain in the provinces and acceding States at the end of each quarter.

The Act prohibits inter-locking directorates among banking companies and the employment of managing agents, as well as granting of unsecured loans or advances to any of the directors or to firm in which directors are interested. Monthly returns are to be submitted to the Reserve Bank relating to unsecured loans to companies in which the directors are interested.

Reserve Bank has now the power, on a permanent statutary basis to control the entire joint stock banking system in the Indian Union. It may give direction to banking companies in regard to their lending policies ; It may caution or prohibit banking companies generally or any banking company in particular against entering into any particular transaction or class of transaction. It may call for periodical as well as *ad hoc* returns, and in the public interest may also publish such information in any consolidated form it deems fit. It may inspect any bank either on its own initiative or on being directed to do so by the Government. Reserve Bank's prior permission is required for opening of new branch offices and the transfer of existing ones. This Act of 1949 was further amended by the *Banking Companies (Amendment) Act,* 1950 which was passed on the 10th March, 1950. The main features of the Act are as follows—(1) It empowers the Reserve Bank to control the opening of branches by Banks in India as well as outside India, (2) scope of the term "Assets in India" is enlarged to include export bills drawn in and import bills drawn on, and payable in India in currencies approved by the Reserve Bank of India as well as securities so approved. (3) The Act contains provisions to facilitate amalgamation of banking companies. (4) The Act provides for automatic transfer for all assets and liabilities of the amalgated banking companies to the transferee company. A compromise or arrangement between a banking company and its creditors is effective only if certified by the Reserve Bank.

By *Reserve Bank of India (Amendment) Act* of 1951, the power of the Reserve Bank was further widened, such as Bank may exempt any bank from the provision of maintaining statutory balances with it or submitting returns under sec. 42 for such period and to such extent as it may think fit ; Bank's power to obtain returns similar to those from scheduled banks is extended to all State co-operative banks ; the right of the Imperial Bank to be the sole agent of the Reserve Bank is limited to Part A & C States ; Bank is authorised to act as an agent for any foreign government or person approved by the Government ; Bank is authorised to undertake the monetary and debt management functions of Part B States by agreement with such States.

Another Act known as *Banking and Insurance Companies Tribunal Act* was passed in Dec. 1949. It prohibits State Governments from referring disputes between the employees and banking or insurance companies, having branches in more than one State, to any officer or authority subordinate to themselves, for adjudication, inquiry or settlement. Such disputes fall under the jurisdiction of the Industrial Tribunal established for the purpose by the Central Government.

INDUSTRIAL FINANCE CORPORATION

The Industrial Finance Corporation came into being under the Industrial Finance, Corporation Act pased on March 27, 1948 which came into force on July 1, 1948. The authorised capital of the Corporation is Rs. 10 crores divided into 20,000 fully paid-up shares of Rs. 5,000 each, of which 10,000 shares have been issued. The Central Government and the Reserve Bank of India have taken up shares worth Rs. one crore each and balance of Rs. 3 crores has been offered to the Scheduled banks, Insurance Companies, Investment Trusts, Co-operative Banks. Under the Act the shares are guaranteed both as to the principal and payment of the annual dividend at such rates as may be fixed by the Central Government. The Central Government have fixed the guaranteed dividend at 2½ per cent per annum. The Corporation is authorised (1) to guarantee loans raised by industrial concerns which are repayable within a period not exceeding 25 years and are floated in the open market. (2) Underwriting the issue of stocks, shares, bonds or debentures by industrial concerns and (3) granting advances to or subscribing to debentures of industrial concerns, repayable within a period not exceeding 25 years.

RURAL BANKING ENQUIRY COMMITTEES REPORT—The important recommendations of the Committee are—(1) Reserve Bank should establish offices in capitals of major States and increase the currency chests of its Issue Department. (2) Imperial Bank should extend its branches to the *taluka* or *tehsil* towns where these do not exist at present. (3) Commercial banks and Co-operative Banks should be encouraged to open branches in *talukas*, towns and smaller towns. (4) Services of postal savings banks should be improved and more fully utilised. (5) Co-operative institutions should be strengthened and given special assistance. (6) Exchange and remittance facilities should be made available on a larger scale and over a wider area than at present. (7) Warehousing Development Board should be established for developing and warehousing through loans and subsidies to banks and co-operative institutions. (8) Reserve Bank should be appointed as banker to all Part B States.

Banking Statistics

CHEQUE CLEARANCES AND NUMBER OF CHEQUES CLEARED

	1949		1950	
	No. of cheques	*Amount in Lakhs (Rs.)*	*No. of cheques*	*Amount in Lakhs (Rs.)*
Calcutta	67,52,787	2,459,08	63,07,141	2,27,235
Bombay	92,92,652	2,612,32	94,94,942	2,68,393
Madras	28,01,008	384,95	30,91,790	39,794
Kanpur	5,35,261	128,57	6,39,738	13,641
Delhi	9,73,993	142,23	11,72,396	14,366
Others	42,05,615	598,21	48,34,278	64,387
	2,45,61,316	6,325,36	2,55,40,285	6,27,816

	1951		1952	
	No. of cheques	*Amount in Lakhs (Rs.)*	*No. of cheques*	*Amount in Lakhs (Rs.)*
Calcutta	69,90,404	3,11,884	70,45,124	2,703,95
Bombay	1,05,94,122	3,180,57	1,06,41,941	2,679,52
Madras	33,16,325	487,07	35,26,942	432,57
Kanpur	6,11,395	14,518	7,01,571	136,94
Delhi	13,53,102	16,758	14,90,451	157,95
Others	51,81,723	77,875	56,28,023	742,47
	2,80,47,071	7,87,799	2,90,34,052	6,853,40

POST OFFICE SAVINGS BANK

	No of depositors (000)	*deposits including interest*	*with-drawals* (*in lakhs*)	*Balances* (*in lakhs of Rs.*)	*Average balance per depositor* (Rs.)
1948	3,153	99,67	80,83	128,11	406·3
1949	3,426	98,15	77,77	148,49	433·3
1950	3,808	101,66	82,96	167,19	439·1
1951	4,090	110,19	93,80	185,06	452·5
1952	4,446	121,33	108,55	199,81	449·4

STATE-WISE DISTRIBUTION OF INDIAN JOINT STOCK BANKS 1952

(*Indian Scheduled & non-scheduled Banks*)

	No. of Banks	*Paid-up Capital* (Rs. 000)	*Reserves* (Rs. 000)	*No. of offices*
Assam	8	29,20	5,32	40
Bihar	8	62,63	27,93	142
Bombay	51	9,50,59	9,88,82	553
M. P.	6	52,57	3,55	146
Madras	157	4,73,50	2,40,77	911
Orissa	1	27	1,13	13
Punjab	16	1,20,92	1,32,45	212
U. P.	23	1,80,33	52,48	412
W. Bengal	35	11,37,07	9,11,12	194
Hyderabad	9	1,19,85	63,04	91
M. B.	3	18,71	26,50	56
Mysore	20	98,47	1,10,97	119
Pepsu	1	15,00	65,78	63
Rajasthan	8	1,82,77	70,26	124
Saurashtra	5	1,12,05	44,51	67
Travancore-Cochin	146	3,20,81	81,08	605
Ajmer	1	41	16	10
Bhopal	1	12,50	..	5
Coorg	..	..	..	5
Cutch	..	..	..	2
Delhi	13	3,80,93	2,42,30	5
Himachal Pradesh	1	7,00	75	84
Manipur	1	14,08	46	7
Tripura	1	16,52	34	1
Vindhya Pradesh	1	20,00	15,08	6
Jammu & Kashmir	1	7,86	5,06	17
	517	43,34,04	30,89,86	3,900

NUMBER OF BANKS

	1946	1947	1948	1949	1950	1951	1952
1. *Indian Banks*							
(i) Scheduled (1A)	78	81	79	78	75	76	76
(ii) Non-scheduled							
2A	58	68	72	78	73	70	72
B	188	185	191	190	189	186	195
C	128	121	119	124	123	117	114
D	168	170	158	129	124	96	60
Total of (i) & (ii)	620	625	619	599	584	545	517
(iii) Co-operative							
A	46	51	56	63	72	79	90
B	239	258	267	298	319	336	355
	285	309	323	361	391	415	445
Total of (i) (ii) & (iii)	905	934	942	960	975	960	962
II *Foreign Banks*							
(i) Scheduled	16	16	16	16	16	16	15
(ii) Non-scheduled	12	7	4	5	5	5	2
Total of I & II	933	957	962	981	996	981	979

MONEY RATES IN INDIA

	Bank rate	*Treasury Bill*		*Bank rate*	*Treasury Bill*
1938-39	3	1·63	1949-50	3	0·51
1945-46	3	0·40	1950-51	3	—
1946-47	3	0·42	1951-52	3½	—
1947-48	3	0·45	1952-53	3½	2·22
1948-49	3	0·49			

INDIAN CURRENCY AND FINANCE

General—During 1952-53, the budgetory position of the Government of India as well as of Railways and the State Governments deteriorated appreciably. The revenue account of the Centre showed a deficit of Rs. 3·8 crores in 1952-53 (revised) as against abnormal surplus of over Rs. 128 crores in 1951-52. Excluding receipts from sale of securities held in reserve, overdrafts, and net increase in floating debt, the overall deficit, taking the revenue and capital accounts together, amounted in 1952-53 to Rs. 64 crores in the case of the Centre and Rs. 58 crores in the case of Part A & B States or an aggregate of Rs. 122 crores as compared to an aggregate surplus of Rs. 7 crores in 1951-52.

The worsening of the budgetary position was due to main factors—(1) the change in the general economic situation during 1952-53 resulted in a steep fall in tax revenues and in railway earnings. (2) the development expenditure of the public sector was stepped up substantially in accordance with the targets set in the Five Years Plan.

Development Expenditure—Increase in development outlay during 1952-53 is one of the factors contributing to the increase in budget deficits. Expenditure on development schemes included in Five Year Plan rose from Rs. 262 crores in 1951-52 to Rs. 322 crores in 1952-53 (revised) for Union Government, Railways and the State Governments taken together. Estimated outlay in 1953-54 amounts to Rs. 413 crores. A good part of development expenditure was financed through grants and loans received from abroad during 1951-52 and 1952-53. Foreign grants and loans extended to India in the two-years period aggregated to Rs. 189 crores.

CENTRAL GOVERNMENT BUDGET

Revenue Account 1951-52—The accounts for 1951-52 revealed a revenue surplus of 128 crores or an increase of Rs. 35 crores over the surplus in the revised estimates for that year.

1952-53 Revised—The Finance Minister had estimated in the final budget proposals a small surplus of Rs. 3·7 crores on revenue account with receipts estimated at Rs. 405 crores and expenditure at Rs. 401 crores. In revised estimates for that year, both receipts and expenditure are larger than the budget estimates by Rs. 14 crores and Rs. 21 crores respectively.

1953-54 Budget—At the 1952-53 levels of taxation, the total revenue is estimated at Rs. 438 crores or an increase of Rs. 19 crores over previous year's revised estimates. As regards expenditure, the budget estimates for 1953-54 are at Rs. 439 crores, Rs. 16 crores higher than in 1952-53 (revised). These estimates of revenue and expenditure leave a deficit of Rs. 1·05 crores which is sought to be converted into a small surplus of Rs. 0·45 crore through certain adjustments in taxes and rates proposed in the budget.

Capital Account—The receipts and expenditures in capital account are substantially higher in 1953-54 (budget) than in the preceding years. And yet the deficit on capital account is only Rs. 31 crores in 1953-54 as against Rs. 124 crores in 1951-52 and Rs. 78 crores in 1952-53. This apparent improvement is due to a net increase of Rs. 110 crores in under Treasury bills. In 1953-54 (budget), receipts on capital account, excluding Treasury bills are estimated at Rs. 208 crores, of which 10 crores are expected to be barrowed from the market.

PUBLIC DEBT

Public Debt of the Central Government—At the end of March 1953, Government of India's total interest-bearing obligations amounted to Rs. 2,646 crores representing a rise of Rs. 26 crores over the March-end figure of the preceding year. The internal interest-bearing obligations of Rs. 2,502 crores showed an increase of Rs. 28 crores. It is expected that by the end of March 1954, total interest-bearing obligations will amount to Rs. 2,776 crores owing largely loan increase of Rs. 110 crores under floating debt.

Interest-yielding assets of the Government of India, covering capital invested in railways and in other commercial departments, debt due from State Governments, Burma, Pakistan, etc., rose by Rs. 82 crores during 1952-53 to Rs. 1,853 crores. Total interest-yielding assets constituted 70 per cent of total interest-bearing obligations as compared to 68 per cent at the end of 1951-52. By the end of 1953-54, interest-yielding assets are expected to rise by Rs. 116 crores to Rs. 1,979 crores. Constituting 71 per cent of the interest-bearing obligations of the Government of India.

Repatriation of sterling debt—During 1952-53, sterling debt of the face value of 0·8 million was repatriated at a cost of Rs. 9·6 lakhs.

Small Savings—Gross receipts of small savings during 1952-53 amounted to Rs. 142·7 crores and gross repayments to Rs. 106·4 crores, showing a net rise of Rs. 36·3 crores as against a net rise of Rs. 38·5 crores in 1951-52.

REVENUE & EXPENDITURE OF THE GOVT. OF INDIA

(*Crores of Rupees*)

	1. *Total Revenue*	*Total Expenditure met from revenue*	*Surplus (+) or deficit (—)*
1938-39	84·47	85·11	—0·64
1948-49	371·70	320·86	+50·84
1949-50	350·39	317·12	+33·27
1950-51	410·66	351·44	+59·22
1951-52	515·36	387·27	+128·09
1952-53 (budget)	404·98	401·25	+3·73
1952-53 (revised)	418·64	422·43	—3·79
1953-54 (budget)	437·76	438·81	+0·45

CAPITAL BUDGET OF THE GOVERNMENT OF INDIA

(*Crores of Rupees*)

	Total Receipts	*Total Disbursements*	*Deficit on Capital Account*
1950-51	120·55	182·59	62·04
1951-52	169·04	293·43	124·39
1952-53 (budget)	125·43	205·19	79·76
1952-53 (revised)	130·01	208·50	78·49
1953-54 (budget)	317·51	348·08	30·57

DEBT POSITION OF THE GOVERNMENT OF INDIA

(*Crores of Rupees*)

	Rupee Debt	*External Debt*		*Rupee Debt*	*External Debt*
1939	709·96	469·10	1949	2,378·11	27·36
1945	1,571·42	38·13	1950	2,462·71	43·38
1946	1,936·95	37·69	1951	2,472·24	49·81
1947	2,121·93	36·52	1952	2,459·83	136·99
1948	2,140·01	29·83	1953	2,492·62	138·53

(*Report of Currency & Finance 1952-53*)

INDIA'S PUBLIC REVENUE, EXPENDITURE AND DEBT

(*Crores of Rupees*)

	1948-49	1949-50	1950-51	1951-52	1952-53 (revised)	1953-54 (Budget)
I. *Revenue Account*						
A. Revenue ..	371·70	350·39	410·66	515·36	418·64	437·76
B. Expenditure ..	320·86	317·12	315·44	387·27	422·43	438·81
Surplus (+) or deficit (—)	+50·84	+33·27	+59·22	+128·09	—3·79	+0·45
II. *Capital Account*						
A. Receipts ..						
Permanent debt ..	—	—	—	23·36	29·60	—
Other debt ..	317·71	124·14	59·09	30·58	50·52	161·23
Repayment of Loans & Advances ..	—	—	—	—	—	—
B. Disbursements ..						
Recoverable war Debts	—	—	—	—	—	—
Capital outlay outside Revenue A/c. ..	408·99	120·30	55·73	118·12	75·83	76·64
Redemption of permanent debt ..	47·54	28·32	7·76	—	—	18·83
Repayment of other debt	—	—	—	—	—	—
Loans and Advances ..	28·66	55·57	57·63	60·16	82·76	96·33
C. Surplus (+) or deficit (—) ..	—167·48	—80·05	—62·04	—124·39	—78·49	—30·57
III. Miscellaneous ..	+34·97	+2·98	+15·25	—2·79	—0·57	+1·97
IV. Overall Surplus (+) or Deficit (—) ..	—81·67	—43·80	+12·44	+0·91	—82·85	—28·15
V. Cash balance ..						
Opening ..	273·90	193·28	149·50	161·78	162·69	79·84
Closing ..	192·23	149·48	161·94	162·69	79·84	51·69
VI. Union Govt. Debt						
(1) Sterling debt ..	24·01	23·35	21·97	21·86	21·82	21·77
(2) Rupee loans ..	1,478·39	1,452·15	1,438·46	1,402·10	1,405·58	1,389·58
(3) Small savings ..	271·73	293·80	331·56	372·57	417·64	462·57
(4) Treasury Bills Ways & Means & T.D.Rs.	373·33	361·48	373·20	335·01	319·19	429·04
(5) Total interest-bearing obligations ..	2,440·27	2,499·64	2,550·54	2,611·16	2,640·26	2,772·04

GOVERNMENT OF INDIA ANNUAL TREASURY BILLS

(*In lakhs of Rupees*)

Year	*amount sold*	*amount outstanding at the end of the period*	*Average yield p.c. per annum*	*Amount sold to Reserve Bank of India*
1938-39	97.49	46,30	1·63	100,12
1945-46	117.91	83,33	0·40	161,99
1946-47	51.27	77,59	0·42	220,30
1947-48	84.56	98,68	0·45	271,33
1948-49	46.01	350,47	0·49	1,117,85
1949-50	38,76	341,86	0·51	1,381,12
1950-51	..	358,02	—	1,394,35
1951-52	..	314,34	—	1,335,50
1952-53	42,00	315,29	2·22	12,33,11

AMOUNT OF STERLING DEBT REPATRIATED SINCE 1937-38

	Face value (Millions of £ sterling)	*Parchase Value*		*Rupeec counterparts created* (crores of *Rs.*)
		Millions of £ sterling	Crores of *Rs.*	
1937-38	2·99	3·04	4·05	1·12
1939-40—1944-45 (war years)	319·85	317·88	424·86	272·44
1945-46	0·28	0·29	1·37	0·01
1946-47	0·76	0·80	1·06	0·01
1947-48	4·65	5·12	6·83	0·45
1948-49	0·18	0·19	0·25	0·02
1949-50	0·08	0·08	0·11	—
1950-51	0·04	0·04	0·5	0·01
1951-52	0·06	0·05	0·07	0·01
1952-53	0·075	0·072	0·096	0·073
	328·97	327·56	437·75	0·073

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CENTRAL GOVERNMENT LOANS

As on 31st March, 1953

(*In Lakhs of Rupees*)

	Amount outstanding		*Amount outstanding*
3 % Loan 1953-55	114,60·58	3 % Victory Loan 1957	114,06·89
2¼% „ 1954	35,60·06	3 % Loan 1958	50,35·63
3½% „ 1954-59	12,95·22	4½% Loan 1958-68	5,85·20
2½% „ 1955	60,45·01	3 % 2nd Victory Loan 1959-61	113,65·64
4½% „ 1955-60	9,05·64		

2¾% Loan 1960 ..	45,63·07
4 % " 1960-70 ..	63,30·26
2½% " 1961 ..	57,00·69
2¾% " 1962 ..	75,86·72
3 % " 1963-65 ..	116,17·46
3 % " 1964 ..	30,33·10
3 % Funding Loan 1966-68 ..	110,11·78
3 % 1st Dev. Loan 1970-75 ..	115,05·83
2¾% Loan 1976 ..	14,77·48
2½% Bhopal War Bonds 1957 ..	26·25
3 % Bhopal Loan 1966-67 ..	1,14·73
3 % Loan 1986 or later (Conversion Loan of 1946) ..	248,91·66
3 % Non-terminable loan (1896-97) ..	8,93·35
	1,403,58·25
Loans not bearing interest ..	4,08·01
Grand Total	1,406,66·26

POST OFFICE CASH CERTIFICATES

(*In Lakhs of Rupees*)

	Amount outstanding		*Amount outstanding*
1948-49 ..	.. —7,49	1951-52 ..	.. —20,29
1949-50 ..	.. —11,36	1952-53 ..	.. —23,18
1950-51 ..	.. —15,90		

POST OFFICE DEFENCE SAVINGS CERTIFICATES

(*In Lakhs of Rupees*)

	Amount outstanding		*Amount outstanding*
1948-49 ..	.. — 75	1951-52 ..	.. — 2,56
1949-50 ..	.. — 1,02	1952-53 ..	.. — 3,11
1950-51 ..	.. — 1,79		

POST OFFICE NATIONAL SAVINGS CERTIFICATES

(*In Lakhs of Rupees*)

	Amount outstanding		*Amount outstanding*
1948-49 ..	.. 25,06	1951-52 ..	.. 75,80
1949-50 ..	.. 40,59	1952-53 ..	.. 94,27
1950-51 ..	.. 57,93		

POST OFFICE SAVINGS BANK

(*In Lakhs of Rupees*)

	Amount outstanding		*Amount outstanding*
1948-49 ..	.. 29,91	1951-52 ..	.. 74,18
1949-50 ..	.. 45,09	1952-53 ..	.. 88,30
1950-51 ..	.. 61,36		

POST OFFICE DEFENCE SAVINGS BANK

(*In Lakhs of Rupees*)

	Amount outstanding		*Amount outstanding*
1948-49	—4,07	1951-52	—4,70
1949-50	—4,46	1952-53	—4,74
1950-51	—4,63		

TEN-YEAR TREASURY SAVINGS CERTIFICATES

(*In Lakhs of Rupees*)

	Amount outstanding		*Amount outstanding*
1950-51	5,31	1952-53	25,64
1951-52	18,39		

INTEREST-BEARING OBLIGATIONS OF GOVERNMENT OF INDIA

(*In Lakhs of Rupees*)

	In India	*In England*	*Dollar-loans*	*Total*
1938-39	736,64	469,12	—	1,205,76
1946-47	2,323,15	58,74	—	2,381,89
1947-48	2,132,59	49,40	—	2,181,99
1948-49	2,412,96	42,84	—	2,455,80
1949-50	2,456,33	39,83	16,77	2,512,93
1950-51	2,500,73	36,17	24,60	2,561,50
1951-52	2,474,17	33,48	112,04	2,619,69
1952-53	2,501,73	30,23	113,74	2,645,70
1953-54 (Budget)	2,634,62	28,99	112,76	2,776,37

INTEREST-YIELDING ASSETS OF THE GOVERNMENT OF INDIA

(*In Lakhs of Rupees*)

	Total interest yielding assets	*Cash and Securities held on treasury a/c.*	*Balance of total interest bearing obligation not covered by the above table*
1938-39	946,38	30,30	229,08
1946-47	1,001,16	513,76	866,97
1947-48	1,160,68	246,12	775,19
1948-49	1,431,12	235,81	788,87
1949-50	1,521,39	172,99	818,55
1950-51	1,681,21	141,97	738,32
1951-52	1,781,16	198,70	639,83
1952-53	1,862,86	136,18	644,66
1953-54 (Budget)	1,978,97	106,53	688,87

DEBT POSITION OF THE GOVERNMENT OF INDIA SINCE 1913-14

(Crores of Rupees)

End of Mar.	*Total Re. debt*	*P.C. increase (+) or decrease (−)*	*External debt*	*End of Mar.*	*Total Re. debt*	*P.C. increase (+) or decrease (−)*	*External debt*
1939	709·96	+2·4	469·10	1949	2,378·11	+11·1	27·36
1945	1,571·42	+17·0	38·13	1950	2,462·71	+3·6	43·38
1946	1,936·95	+23·3	37·69	1951	2,472·24	+2·3	49·81
1947	2,121·93	+9·6	36·52	1952	2,459·83	−0·9	136·99
1948	2,140·01	+0·9	29·85	1953	2,492·62	+0·6	138·53

PERCENTAGE OF TOTAL RUPEE DEBT

31st Mar.	*G. P. Notes*	*Stock certificates*	*S.G.L. accounts*	*Miscellaneous i.e., G.P. Notes anb Stock certificates held in London*
1942	53·69	15·40	30·57	0·34
1943	25·60	31·28	42·85	0·27
1945	37·05	25·95	36·85	0·15
1948	33·04	20·94	45·99	0·03
1951	32·37	17·73	49·87	0·03
1952	33·19	17·61	49·18	0·02
1953	32·93	16·25	50·80	0·02

NET DEFENCE EXPENDITURE OF INDIA

(In Crores of Rupees)

1938-39	46·18	1950-51	164·13
1945-46	360·23	1951-52	170·96
1946-47	207·37	1952-53 (budget)	197·95
1947-48	86·63	1952-53 (revised)	192·73
1948-49	146·05	1953-54 (budget)	199·84
1949-50	148·86		

STATES' FINANCES

FINANCE OF PART 'A' STATES

The following Table shows the consolidated position of Part 'A' States as regards their revenue and expenditure (on revenue account) for the years 1950-51, 1952-53 and 1953-54:—

(Crores of Rupees)

	1950-51	1951-52	1952-53 *(Revised)*	1953-54 *(Budget)*
Revenue	294·37	315·60	336·96	350·51
Expenditure	293·08	309·11	340·06	362·93
Surplus (+) or Deficit (−)	+1·29	+6·49	−3·10	−12·42

1951-52 Accounts—The improvement in 1951-52 over the previous year was due to the fact that while the total revenue rose by Rs. 21 crores, the total expenditure has increased by only 16 crores. With the exception of Madras which had a heavy deficit of Rs. 5 crores, all the States had revenue surpluses.

1952-53 Revised Estimates—The revised estimates for 1952-53 show a smaller deficit than the budget estimates. The reasons for the reduced deficit are large withdrawals from Revenue Reserves and transfer of additional resources from the Centre to the States. Compared with 1951-52, expenditure shows a larger rise (Rs. 31 Crores) than revenue (Rs. 21 Crores). Expenditure increased in all States except Bihar.

1953-54 Budget—For 1953-54, total revenue is put at Rs. 320·51 crores. The increase of about Rs. 14 crores in total revenue over that in 1952-53 (revised) is however outweighed by a rise of Rs. 23 crores in estimated expenditure of Rs. 363 Crores. As in 1952-53, the major increase in expenditure is under developmental heads (Rs. 9·0 Crores). All States estimate higher revenues in 1953-54 with the exception of Bihar, West Bengal and Orissa.

Capital Account—Despite a substantial increase in development expenditure, the capital account of Part A States shows no serious deterioration from year to year. This is due mainly to the two factors, namely, increased loans from the Centre between 1951-52 and 1953-54 (budget) and net receipts from schemes of State trading in 1952-53 and 1953-54 instead of net investment as in 1951-52 (Rs. 21 Crores). Of the investments on development schemes, the most important item is that on multi-purpose river valley schemes and irrigation, the expenditure on which amounts to Rs. 44 Crores in 1951-52, Rs. 71 Crores in 1952-53 (revised) and Rs. 80 Crores in 1953-54 (budget). Next in importance are electricity schemes and construction of roads and buildings. In 1951-52 Accounts, the total receipts amounted to Rs. 133 Crores as against disbursements of Rs. 147 Crores. In 1952-53 (revised) accounts, both receipts at Rs. 154 Crores and disbursements at Rs. 157 Crores are higher than in 1951-52, the increase in receipts being more than in disbursements. The budget estimates for 1953-54 the receipts on capital account is at Rs. 152 Crores and disbursements at Rs. 161 Crores.

FINANCES OF PART 'B' STATES

General Revenue Account—The table below shows the consolidated budgetary position, on revenue account of Part 'B' States for 1951-52, 1952-53 and 1953-54:—

(*Crores of Rupees*)

	1951-52	1952-53 (*Revised*)	1953-54 (*Budget*)
Revenue	106·70	110·91	115·29
Expenditure	100·53	111·18	118·62
Surplus (+) or Deficit (—)	—5·37	—1·27	—3·33

1951-52 Accounts—The accounts for 1951-52 reveal a surplus of a little over Rs. 6 crores, as against a surplus of Rs. 3 crores in the revised estimates for that year. This was due to a small rise in revenue (Rs. 0·43 crore) and a substantial fall in expenditure (Rs. 2·7 crores) compared to the revised estimates.

1952-53 Revised—The revised estimates for 1952-53 show a rise in expenditure of Rs. 11 crores over the 1951-52 level and an increase of Rs. 4·2 crores in revenue. The sharp rise of Rs. 11 crores in expenditure reflects mainly the increased expenditure on nation-building activities (Rs. 9 crores) by all the States.

1953-54 Budget—Due to a larger rise in expenditure (Rs. 7·4 crores), mostly under socio-economic activities (Rs. 7·3 crores), than in revenue (Rs. 4·4 crores), the net position in 1953-54 (budget) shows a deterioration of Rs. 3 crores compared to 1952-53 (revised). Excepting Rajasthan, which hopes to balance its budget, all the other States show deficit, notably Mysore. Large increase in expenditure on developmental items is spread over all the States with the exception of Saurashtra.

CAPITAL OUTLAY—DEVELOPMENTAL

(*Lakhs of Rupees*)

A. States

	Assam	*Bihar*	*Bombay*	*M.P.*	*Madras*
1951-52	.. 16	6,37	8,78	2,07	19,10
1952-53	.. 27	7,13	9,28	1,27	20,13
1953-54	.. 86	6,97	14,48	1,68	17,67

	Orissa	*Punjab*	*U.P.*	*W.B.*	*Total*
1951-52	.. 9,17	15,26	7,24	11,54	79,69
1952-53	.. 12,73	25,15	13,21	18,79	1,07,96
1953-54	.. 15,22	32,55	14,87	22,48	1,26,78

B. States

	Hyderabad	*M.P.*	*Mysore*	*Pepsu*	*Saurashtra*	*Travancore Cochin*	*Total*
1951-52	6,01	96	3,20	5	1,48	7,47	20,60
1952-53	7,20	1,61	5,01	32	2,15	4,32	22,44
1953-54	6,86	1,63	5,12	2,84	2,75	5,29	27,96

BUDGETARY POSITION OF PART A STATES

(*In Lakhs of Rupees*)

	Total Revenue	*Total Expenditure*	*Surplus+ Deficit—*
Madras			
1950-51	.. 58,16	59,45	—1,29
1951-52	.. 59,43	64,44	—5,10
1952-53 (Revised)	.. 63,36	68,75	—5,39
1953-54 (Budget)	.. 65,75	65,75	—
Bombay			
1950-51	.. 64,31	64,37	— 6
1951-52	.. 62,70	62,58	+ 12
1952-53 (Revised)	.. 64,34	68,24	—3,90
1953-54 (Budget)	.. 67,84	67,78	+ 8

West Bengal			
1950-51	34,30	37,33	−3,03
1951-52	38,59	37,31	+1,28
1952-53 (Revised)	38,30	42,13	−3,83
1953-54 (Budget)	38,16	43,27	−5,11
Uttar Pradesh			
1950-51	51,89	51,84	+ 5
1951-52	55,56	55,50	+ 6
1952-53 (Revised)	66,41	66,41	—
1953-54	74,38	78,80	−4,42
Punjab			
1950-51	16,86	16,00	+ 86
1951-52	18,17	16,45	+1,72
1952-53 (Revised)	18,56	16,89	+1,67
1953-54 (Budget)	19,74	20,05	− 31
Bihar			
1950-51	28,97	26,05	+2,92
1951-52	34,30	32,82	+1,48
1952-53 (Revised)	35,77	31,36	+4,41
1953-54 (Budget)	33,00	33,34	− 34
Madhya Pradesh	*Total Revenue*	*Total Expenditure*	*Surplus+ Deficit−*
1950-51	19,65	16,74	+2,91
1951-52	23,60	18,22	+5,38
1952-53 (Revised)	23,90	21,20	+2,70
1953-54 (Budget)	25,06	24,53	+ 53
Assam			
1950-51	9,92	9,28	+ 64
1951-52	11,29	10,93	+ 36
1952-53 (Revised)	12,72	12,68	+ 4
1953-54 (Budget)	13,01	14,97	−1,96
Orissa			
1950-51	10,31	12,01	−1,70
1951-52	11,96	10,86	+1,10
1952-53 (Revised)	13,60	12,40	+1,20
1953-54 (Budget)	13,57	14,46	− 89

TOTAL BUDGETARY POSITION OF PART A STATES

(*In Lakhs of Rupees*)

	Total Revenue	*Total Expenditure*	*Surplus+ Deficit−*
1950-51	294,37	293,08	+1,29
1951-52	315,60	309,11	+6.49
1952-53 (Revised)	336,96	340.06	−3,10
1953-54 (Budget)	350,51	362,93	−12,42

BUDGETARY POSITION OF PART B STATES

(On Revenue Accounts)

(*In Lakhs of Rupees*)

	Revenue	*Expenditure*	*Surplus (+) or Deficit—*
Hyderabad			
1950-51	26,18	27,55	−1,37
1951-52	29,87	28,19	+1,68
1952-53 (Revised)	27,91	26,82	+1,09
1953-54 (Budget)	28,02	28,22	− 20
Mysore			
1950-51	14,41	13,51	+ 90
1951-52	18,31	18,35	+ 4
1952-53 (Revised)	19,67	20,21	− 54
1953-54 (Budget)	20,62	22,20	−1,58
Travancore-Cochin			
1950-51	13,99	12,74	+1,25
1951-52	17,91	13,63	+4,28
1952-53 (Revised)	16,73	16,83	− 10
1953-54 (Budget)	17,14	17,28	− 14
Rajasthan			
1950-51	14,61	13,91	+ 70
1951-52	15,51	15,76	− 25
1952-53 (Revised)	17,50	17,14	+ 36
1953-54 (Budget)	19,44	19,44	—
PEPSU			
1950-51	6,04	5,03	+1,01
1951-52	6,09	4,66	+1,43
1952-53 (Revised)	6,25	5,79	+ 46
1953-54 (Budget)	6,35	7,04	− 69
Saurashtra			
1950-51	7,77	7,42	+ 35
1951-52	7,52	8,63	−1,11
1952-53 (Revised)	9,84	11,66	−1,82
1953-54 (Budget)	9,42	9,95	− 53
Madhya Bharat			
1950-51	10,38	11,77	−1,39
1951-52	11,49	11,31	+ 18
1952-53 (Revised)	13,01	12,73	+ 28
1953-54 (Budget)	14,30	14,49	− 19

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TOTAL BUDGETARY POSITION OF PART B STATES

(*In Lakhs of Rupees*)

	Total Revenue	*Total expenditure*	*Surplus+ Deficit—*
1950-51	93,380	91,930	+1,45
1951-52	10,670	10,053	+6,17
1952-53 (Revised)	11,091	11,118	− 27
1953-54 (Budget)	11,529	11,862	−3,33

BUDGETARY POSITION OF PART C STATES

(On Revenue Account—Thousands of Rupees)

Ajmer			
1952-53 (Revised)	.. 2,26,29	2,2269	+3,60
1953-54 (Budget)	.. 1,88,76	1,88,76	—
Bhopal			
1952-53 (Revised)	.. 2,06,72	2,02,32	+4,40
1953-54 (Budget)	.. 2,33,04	2,32,59	+ 45
Delhi			
1952-53 (Revised)	.. 3,62,53	3,62,53	—
1953-54 (Budget)	.. 4,25,63	4,25,63	—
Himachal Pradesh			
1952-53 (Revised)	.. 2,39,69	2,36,94	+2,75
1953-54 (Budget)	.. 2,66,83	2,65,96	+ 87
Vindhya Pradesh			
1952-53 (Revised)	.. 3,18,30	3,07,93	+10,37
1953-54 (Budget)	.. 4,39,60	4,39,49	+ 11
Total			
1952-53 (Revised)	.. 13,53,53	13,32,41	+21,12
1953-54 (Budget)	.. 15,53,86	15,52,43	+1,43

STATE GOVERNMENT LOANS

(As on 31st March, 1953—Lakhs of Rupees)

	Amount outstanging
Madhya Pradesh	
3% Loan 1955 ..	50·00
3% „ 1956 ..	50·54
3% „ 1958 ..	52·70
3% „ 1960 ..	1,01·45
3% „ 1962 ..	1,02·18
3% „ 1964 ..	2,03·29
	5,60·16
Bombay	
3% Loan 1955 ..	3,33·49
3% „ 1956 ..	3,34·50
3% „ 1958 ..	3,28·76
3% Dev. Loan 1960 ..	2,97·28
3% Dev. Loan 1962 ..	5,90·92
3½ Dev. Loan 1962 ..	3,04·07
3% Bom. Tapi irrigagation & Dev. Loan 1961 ..	68·29
	26,24·04
Uttar Pradesh	
3% „ 1958 ..	3,08·00
3% „ 1960 ..	2,24·80

	Amount outstanding
2¾% „ 1961 ..	2,29·09
3% „ 1961-66 ..	1,64·89
3½% „ 1962 ..	2,00·29
4% Dev. Loan 1964 ..	6,11·45
3¼% „ U.P. E.E. Act Bonds ..	2,22·35
	19,57·87
Madras	
3% „ 1955 ..	1,23·25
3% „ 1956 ..	1,25·10
3% „ 1958 ..	1,07·95
3% „ 1959 ..	1,23·96
3% Dev. Loan 1960 ..	2,78·44
Madras Bonds 1960 ..	4,38·25
2¾% Loan 1961 ..	3,81·77
3½% „ 1952 ..	3,01·49
4% Madras Dev. Loan 1964 ..	5,24·56
	25,46·85
West Bengal	
3½% W. B. Loan 1962	1,75·00
4% „ 1964 ..	2,00·00
	3,75·00
Grand Total ..	80,63·92

DEVOLUTION OF TAXES AND GRANTS-IN-AID TO STATE GOVERNMENTS

The Finance Commission, appointed in November 1951 in terms of Article 280 of the Constitution, recommended—(1) an increase in States share of the net proceeds of income-tax from 50 per cent to 55 per cent, of which four-fifths will be allocated on the basis of population and the balance on the basis of collection. (2) allocation to the States, on a population basis, of 40 p.c. of the net proceeds of Union excise duties on tobacco, matches and vegetable products (3) an increase in grants-in-aid to Assam, Bihar, Orissa and West Bengal in lieu of a share in the export duty on jute and jute products and (4) additional general grants-in-aid to certain States which are in need of assistance and special grants to certain less developed states for expansion of primary education facilities.

INCOME-TAX ALLOCATIONS

The allocation of income-tax amongst the States has been based on population and collection of income-tax in respective territories. The percentage shares prescribed for Part A & B States are given below :—

Part A States	*p.c.*	*Part B States*	*p.c.*
Assam	2·25	Hyderabad	4·50
Bihar	9·75	Madhya Bharat	1·75
Bombay	17·50	Mysore	2·25
M.P.	5·25	Pepsu	0·75
Madras	15·25	Rajasthan	3·50
Orissa	3·50	Saurashtra	1·00
Punjab	3·25	Travancore-Cochin	2·50
Uttar Pradesh	15·75		
W. Bengal	11·25		

ALLOCATION OF UNION EXCISE DUTIES

As regards Union excise duties, the Finance Commission have selected the duties on tobacco, matches and vegetable products for division. The States share of these duties amounts to 40 per cent of net proceeds and will be distributed amongst them as follows—

Part A States	*p.c.*	*Part B States*	*p.c.*
Assam	2·61	Hyderabad	5·39
Bihar	11·60	Madhya Bharat	2·29
Bombay	10·37	Mysore	2·62
M. P.	6·13	Pepsu	1·00
Madras	16·44	Rajasthan	4·41
Orissa	4·22	Saurashtra	1·10
Punjab	3·66	Travancore-Cochin	2·68
U. P.	18·23		
W. Bengal	7·16		

GRANTS-IN-AID

In regard to the grants-in-aid, the Commission have recommended increased grants to West Bengal, Bihar and Orissa in lieu of their share of export duty on jute and jute products under the article 273 of the Constitution. These grants amount to Rs. 1,50 lakhs for West Bengal, Rs. 75 lakhs each for Bihar and Assam and Rs. 15 lakhs for Orissa. The grants-in-aid under the substantive portion of Clause (1) of Article 275 have been recommended in the case of 7 States only. The following Table shows the general grants recommended for individual States.

	Lakhs of Rs.		*Lakhs of Rs.*
Assam	100	Saurashtra	40
Mysore	40	Travancore-Cochin ..	45
Orissa	75	West Bengal	80
Punjab	125		

SPECIAL GRANTS

The Commission have also recommended special grants to 8 States for increasing primary education facilities.

	Lakhs of Rs.			
	1953-54	1954-55	1955-56	1956-57
Bihar	41	55	69	83
M. P.	25	33	42	50
Hyderabad	20	27	33	40
Rajasthan	20	26	33	40
Orissa	16	22	27	32
Punjab	14	19	23	28
Madhya Bharat ..	9	12	15	18
Pepsu	5	6	8	9

All these recommendations of the Finance Commission have been accepted by the Union Government.

GRANTS AND LOANS TO STATES

Side by side with the increase in financial assistance to the States as a result of the recommendations of the Finance Commission, there has also been an increase in grants and loans to States in order to help them implement their part of the Five Year Plan. Grants to Part A and Part B. States for development, rehabilitation of refugees, Grow More Rood schemes, Community projects, relief of damage due to natural calamities, etc., and subventions from Central Road Fund rose from about Rs. 16 crores in 1951-52 to Rs. 22 crores in 1952-53 and are expected to reach Rs. 32 crores in 1953-54 (budget).

RESOURCES MADE AVAILABLE TO PART A AND B STATES. BY THE CENTRE

(*Crores of Rupees*)

	1951-52	1952-53 (*Revised*)	1953-54 (*Budget*)
(1) *Share of Tax Revenues*			
Income-tax ..	52·86	56·82	54·90
Union Excise Duties ..	..	16·42	16·49
Total of (1) ..	52·86	73·24	71·39
(2) *Grants & Subventions* ..	33·34	41·73	53·44
(3) Loans	75·71	117·12	131·20
Grand total of (1), (2), & (3)	161·91	232·09	256·03

BULLION

Price Trends—With restrictions on imports and exports of bullion remaining in force, the bullion market in India continued to be virtually isolated from world bullion markets. Price movements were therefore, mainly governed by domestic developments, although, as in the previous years, market sentiment continued to be influenced, on occasions by international factors, specially in regard to gold. The quotations in both gold and silver ruled substantially lower, reflecting, among other factors, the impact of tight monetary conditions and the continued inflow of smuggled gold, while demand from the rural sector also appeared to have receded following the recession in agricultural prices.

Production of Gold and Silver—The upward tendency in India's gold productions noticed since 1950 continued during 1952, the estimated output rising further from 226,364 ounces in 1951 to 252,911 ounces. Its value, however worked out lower at Rs. 6·0 ounces valued at Rs. 87,464.

Silver production which had suffered a set back during 1951, also rose from 14,612 ounces (valued at Rs. 70,310) to Rs. 20,485 ounces valwil at Rs. 87,464.

SPOT PRICE OF GOLD & SOVEREIGN IN BOMBAY

(*Gold : per fine tola*)

	GOLD							SOVEREIGN							
	Highest		*Lowest*		*Average*			*Highest*		*Lowest*		*Average*			
	Rs.	as.	Rs.	as.	Rs.	as.	p.	Rs.	as.	Rs.	as.	Rs.	as.	p.
1947-48	117	12	95	14	108	0	4	74	14	64	0	55	13	5
1948-49	121	0	103	0	114	9	10	79	8	69	4	67	3	11
1949-50	119	10	107	2	114	14	11	79	0	71	11	70	9	9
1950-51	120	2	104	12	113	7	4	78	4	73	13	75	0	1
1951-52	118	10	79	8	109	1	1	80	0	61	0	75	2	5
1952-53	95	14	77	5	88	0	0	66	4	55	0	76	0	9

SPOT PRICE OF SILVER

(Per 100 Tolas Gross)

	Highest			*Lowest*			*Average*		
1947-48 ..	183	13	0	142	8	0	166	12	6
1948-49 ..	190	8	0	166	8	0	177	9	0
1949-50 ..	192	12	0	158	14	0	174	11	10
1950-51 ..	198	12	0	185	14	3	185	14	0
1951-52 ..	207	4	0	188	4	3	188	4	3
1952-53 ..	174	12	0	159	8	4	159	8	4

PRODUCTION OF GOLD IN INDIA

(Thousands of fine ounces)

	Value Rs.			*Value Rs.*	
1945 ..		.. 168	1949 ..	4,99,00,264	.. 164
1946 ..		.. 132	1950 ..	5,89,29,848	.. 197
1947 ..	4,89,54,639	.. 172	1951 ..		.. 226
1948 ..	5,43,20,157	.. 180	1952 ..		.. 253

MISCELLANEOUS

CONTROL OF CAPITAL ISSUES

(Rupees in Crores)

	Immediate Schemes		*Long-ranged Schemes*		*Two Schemes combined*	
	No. of Companies.	*Amount Sanctioned.*	*No. of Companies.*	*Amount Sanctioned.*	*No. of Companies.*	*Amount Sanctioned.*
Total for 1952 ..	251	38·93	3	0·86	254	39·79
Total for 1951 ..	328	48·43	15	11·13	343	59.56
Grand total (17th May, 1943 to 31st Dec. 1952) ..	6,059	679·97	771	444·23	6,830	1,124·19

CURRENCY CIRCULATION

(In Lakhs of Rupees)

	Notes	*Rupeecoin*	*Total*	*Incrase— Decrease+*
1949-50 ..	1,120,35	132.61	1,252,96	— 6.22
1950-51 ..	1,204,24	138,45	1,342.69	+ 86,53
1951-52 ..	1,097,94	125,45	1,223,39	—116,26
1952-53 ..	1,089,95	119,71	1,209,66	— 17,82

INDUSTRIAL FINANCE CORPORATION

(In Lakhs of Rupees)

Liabilities	1949	1950	1951	1952	1953
Capital Authorised (10,00·00)					
Issued & Paid-up ..	4,95·35	5,00·00	5,00·00	5,00·00	5,00·00

Reserve Fund ..	—	0·5	1·00	2·00	3·00
Bonds & Debentures ..	—	5,30·00	5,30·00	5,80·00	5,80·00
Fixed Deposits ..	—	—	—	—	—
Contingent liabilities ..	—	—	—	—	—
Other liabilities ..	4·38	34·76	36·79	40·44	60·52
Total ..	4,99·73	10,65·26	10,67·79	11,22·94	11,44·02
Assets					
Cash in hand & with banks ..	94·26	26·11	47·28	55·08	25·60
Investment in Govt. Securities ..	3,58·41	6,95·83	4,58·33	3,58·27	2,00·38
Loans & Advances ..	29·90	3,15·06	5,20·79	6,55·42	8,61·67
Debentures ..	—	—	—	—	—
Guarantees & underwriting Agreements ..	—	—	—	—	—
Other assets ..	17·16	28·26	41·39	54·17	56·37
Total ..	4,99·73	10,65·26	10,67·79	11,22·94	11,44·02

INDEX NUMBERS ON VARIOUS SUBJECTS

Index Numbers of Wholesale Prices & Cost of Living in Selected Countries

(*Base* : 1948=100) : P=wholesale prices ; C=Cost of living

	Australia		Canada		France		India		U. K.		U. S.	
	P.	C.	P.	C.	P.	C.	P.	C.	P.	C.	P.	C.
1949	112	109	103	104	112	118	104	101	105	103	95	99
1950	132	120	109	107	121	131	109	103	120	106	99	100
1951	163	146	124	118	155	154	120	109	146	116	110	108
1952	184	170	117	121	163	171	105	111	149	126	107	110

ALL INDIA INDEX NUMBERS OF SECURITY PRICES

(*Base* : 1938=100)

Average of weeks	*Govt. & Semi Govt. Securities*	*Fixed Dividend Industrial Securities*	*Variable Dividend Industrial Securities*	*Govt. of India*	*States ((Pt. B.)*	*Municipal, Port or improvement Trusts*
1947-48 ..	103·3	120·2	181·5	103	104	102
1948-49 ..	102·0	109·4	136·5	102	102	98
1949-50 ..	101·2	101·9	115·4	101·4	99·4	97·3
1950-51 ..	100·0	101·0	124·2	100·1	98·7	96·6
1951-52 ..	95·8	97·2	127·8	95·9	97·6	92·6
1952-53 ..	91·2	90·8	107·3	91·8	94·9	86·8

Sub-Group Indices of Fixed Dividend Industrial Securities*

(Base 1938=100)

	Electricity	*Cotton*	*Jute*	*Coal*	*Iron*	*Sugar*	*Paper*	*Plantations*
1947-48 ..	85	185	125	133	100	129	127	136
1948-49 ...	81	166	112	116	89	129	121	126
1949-50 ..	80	151	95	109	90	112	104	110
1950-51 ..	82	147	91	105	92	107	98	112
1951-52 ..	77	140	87	107	86	107	93	109
1952-53 ..	76	128	81	96	84	92	87	101

ALL INDIA INDEX NUMBER OF SECURITY PRICES

(Base 1938=100)

	March 1953	March 1952	Average for 1952-53	Average for 1951-52
Gilt-edged (Central Govt. Loans) ..	92·4	91·4	91·8	95·9
Fixed dividend Securities ..	90·1	92·8	90·8	97·2
Variable dividend Securities ..	107·0	115·5	107·3	127·8

INDEX NUMBERS OF WHOLESALE PRICES IN INDIA

General purpose Series

(Base : Year ended August 1939=100

	Foods	*Raw materials*	*Semi-manufactures*	*Manufactured articles*	*Mis.*	*General Index*
1947-48 ..	306·1	377·5	261·6	286·4	456·2	308·2
1948-49 ..	382·9	444·8	327·3	346·1	525·2	376·2
1949-50 ..	391·3	471·7	331·6	347·2	570·7	385·4
1950-51 ..	416·4	523·1	348·9	354·2	707·4	409·7
1951-52 ..	398·6	591·9	374·4	401·5	721·6	434·6
1952-53 ..	357·8	436·9	343·8	371·2	614·1	380·6

INDEX NUMBERS OF COST OF LIVING (Working Classes)

(*Base* : August 1939=100)

	*All India**	*Bombay*	*Calcutta*	*Madras*
1948-49 ..	134+	297	345	320
1949-50 ..	138+	291	349	330
1950-51 ..	138+	302	353	333
1951-52 ..	143+	314	369	343
1952-53 ..	—	329	348	339

(*Report on Currency & Finance* 1952-53)

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* Interim Series ; base 1944=100

† Relates to Calander year

INDEX MEMBERS OF EXPORTS AND IMPORTS
(Reserve Bank of India Series. Base 1948-49=100)

Exports—quantity Index

	Food, Drink & Tobacco	*Raw materials*	*Manufactured articles*	*General*
1949-50	108	91	109	105
1950-51	111	80	122	110
1951-52	115	63	89	89
1952-53	107	83	93	94

Imports—quantity Index

1949-50	86	81	108	94
1950-51	62	101	83	83
1951-52	141	107	89	108
1952-53	79	79	67	74

Exports—Price Index

1949-50	113	106	100	105
1950-51	130	143	122	129
1951-52	151	191	185	178
1952-53	134	120	108	116

Imports—Price Index

	Food Drink etc.	*Raw materials*	*Manufactured articles*	*General*	*Net terms of trade*
1949-50	96	103	95	98	107
1950-51	97	106	113	106	122
1951-52	118	173	145	147	121
1952-53	132	116	137	128	91

SCIENTIFIC & INDUSTRIAL PROGRESS IN INDIA

Scientific Research in India—India has a long tradition of scientific research. It took pride of place in ancient India. Old Sanskrit texts bear witness to the high quality of research in medicine, astronomy and mathematics. But science was in eclipse in the middle ages and India began to lose her pre-eminence among the nations of the world. Science received little encouragement under British rule in India. In consequence, the country has remained backward in many respects. Official patronage was denied to science but it found devotees among the people. Scientific thought continued to progress as a result of individual initiative, but there was no attempt to utilize science for the good of the country until the creation of the *Indian (then Imperial) Council of Agricultural Research* in 1929. Research in medicine and public health was soon initiated. Proposals for industrial research were, however, shelved on some pretext or other. Circumstances compelled the British to reverse their policy. With the advent of World War, India became the supply base for the Allied forces in the Middle and Far East. So Government of India sought the aid of science to make the most of the resources available within the country. Accordingly the *Board of Scientific and Industrial Research* was set up in 1940. With the experience gained in the working of the Board, the *Council of Scientific and Industrial Research* came into being in April 1942. A fund called the *Industrial Research Fund* with an annual non-lapsable grant of Rs. 10 lakhs for a period of five years was instituted by the Government and placed at the disposal of the Council.

Role of Indian Scientists—India occupies an honourable place in the realm of science although the number of workers is much less than it should be, when the size and population of the country is taken into account.

India can boast of Nobel Prize winner in Physics in Sir C. V. Raman, the famous discoverer of "Raman effect;" significant work has been done by Sir C. V. Raman and his collaborators at Bangalore on the dynamics of crystals like diamond, rock salt and quartz. Work on optics has recently been initiated in the newly created Raman Research Institute at Bangalore, of which he is the director. Other famous scientists are Sir J. C. Bose who won renown by his work in plant physiology, S. Ramanujam, the mathematical prodigy of India whose early death ended a career of great promise, Dr. M. N. Saha for thermal ionization and radiation, late Dr. Birbal Sahni, an authority in paleobotany, who carried interesting work on the age of salt ranges of the Punjab. From an examination of micro-flora or minute fossil plants embedded in the mighty walls of white salt, he was able to determine the period of their formation; Dr. K. S. Krishnan, famous for his work on magnetism, H. J. Bhaba whose work on the cascade theory and ionisation of showers has won for him international reputation, P. C. Mahalanobis of statistics fame, late Sir P. C. Roy for mercurious nitrate, S. S. Bhatnagar, well-known for his work on mercury nitrates, S. N. Bose of Bose-Einstein statistics fame, T. S. Venkataraman, the sugarcane expert, Sir J. C. Ghose, J. N. Mukherjee on colloid chemistry and soil research, Dr. Chandrasekhar's contribution to astronomy and astrophysics, K. Venkataraman's researches on dyestaffs, D. M. Bose famed for research work in magnetism and Dr. N. R. Dhar for scientific researches.

In the field of medical science, India was the first country to discover that micro-organisms responsible for malaria and transmitted by mosquitoes. The diagnosis, prevention and cure of kala-azar have been made possible by the work of the late Dr. U. N. Brahmachari; Dr. R. N. Chopra has investigated the cictine principle of Indian medicinal plants and their pharmacological action.

India's International Contacts in Science—India is a member of the International Council of Scientific Unions and of eleven individual Scientific Unions. The works of the Indian scientists have been recognised and many of them have been appointed to various organisations under the International Scientific Unions. India's views on the various scientific bodies are thus fully represented. Indian scientific delegation are regularly sent to a number of International Conferences, through which Indian scientists receive regular information from abroad on the latest developments in specialized subjects. Several International Conferences are also being held in India at regular intervals.

The Indian Scientific Liasion Officer with the Indian High Commissioner in London obtains information from Britain and European countries on technical subjects required by our research laboratories, universities and scientific institutions. In most cases, this kind of information can not be obtained through the ordinary channels. The Scientific Liaison Office helps the movement of scientists within the Common wealth and provides adequate facilities for Indian scientists and others visiting U.K. and European countries.

Ministry of Natural Resources and Scientific Research—On June 1, 1948 a separate Department of Scientific and Industrial Research was set up under the direct control of the Prime Minister. The functions of this department include the co-ordination of the scientific activities of other ministries, advice to Government Departments, maintenance of scientific liaison with other countries and institutes, research scholarships in applied scientific subjects, carrying out of all work in connection with the International Council of Scientific Unions and International Scientific Commissions. This Department also took over the work of the Board of Research on Atomic Energy. On the 1st February 1951 the Ministry of Natural Resources and Scientific Research was created and the former Department of Scientific and Industrial Research became a part of this new Ministry. The Council of Scientific and Industrial Research comes under this ministry for administrative purposes but still retains its separate entity.

Council of Scientific and Industrial Research—The two world wars forced the place of scientific advancement in India. As a source of war supplies. India was too important to be neglected. The Government of India therefore sought the aid of science to make most of the available resources. The growing research consciousness in the country coupled with India's own contributions to fundamental research and the emergence of scientists of international fame compelled the Government of India to set up the Board of Scientific Research in 1940. Later, planning and co-ordination were made possible in an increasing degree by the establishment of the Council of Scientific and Industrial Research in 1941. In 1942 the Council of Scientific and Industrial Research was constituted as an autonomous body with the object of establishing, maintaining and managing laboratories and institutions devoted to scientific and industrial research. In addition to its other functions, it awards research studentships and fellowships and utilizes the results of research for the development of industries. It also publishes scientific papers and journals to disseminate information regarding scientific and industrial matters.

The Council is administered by a governing body with the Prime Minister for its President and the Minister of Natural Resources and Scientific Research as Vice-President. In technical matters, the governing body is advised by a Board of Scientific and Industrial Research consisting of 19 members. The Government Departments interested in the industrial research are represented by four members. The Board advises the Government on (a) proposals for the initiation of research concerning specific problems (b) proposals from scientific institutions, including universities for the study of problems relating to particular trades and industries and (c) proposals for the study and survey of indigenous resources as an essential preliminary to systematic investigations.

The Board is assisted by 26 Research Advisory Committees. Department of Scientific Research was created by the Government of India in June, 1948 to supervise and co-ordinate scientific research undertaken in the State and private institutions. Subsequently, the Department became a part of the Ministry of Natural Resources and Scientific Research which was established in 1952.

Five Year Plan—The plan has set apart a sum of Rs. 4·6 crores to be spent for the scientific and industrial research during five-year period. The first phase envisaged the establishment of the eleven national laboratories. Among the other projects included in the Plan which are still in the initial stages of construction and development are *Radio and Electronics Engineering Research Institute at Pelani* and *Central Salt Research Institute at Bhavnagor*. It is also proposed to establish a Mechanical Engineering Research Institute during the Plan period. The Plan also provides for assistance to a number of important institutions engaged in scientific research, such as the Indian Academy of Sciences at Bangalore, the Indian Association for the Cultivation of Science at Jadavpur, Calcutta, the Institute of Nuclear Physics and the Bose Institute, both of Calcutta, the National Institute of Sciences of India at New Delhi, the Birbal Sahani Institute of Paleobotany at Lucknow.

To ensure the exploitation of the results of research, the creation of a National Research Development Corporation has been recommended by the Planning Commission.

Technological Institutes—Setting up of four technological institutes in Bombay, Madras, Calcutta and North India on the lines of the Massachusetts Institute of Technology, U.S.A., has been sanctioned and which will not only increase the suppply of technical and scientific personnel of India but will go a great way towards the scientific and technological development of the country. The four institutions, each of which has been planned to have 3,000 students at a time, are estimated to cost Rs. 12,00,00,000 non-recurring and about Rs. 5,00,00,000 recurring annually. One institution has already been started at Hijli (Khargpur) in 1951 and another is being started at Kurla.

Scientific Publications—Dissemination of scientific information is one of the important functions of the Council of Scientific and Industrial Research. An important development in the field of scientific research is the publication of *Wealth of India* as the dictionary of economic products and industrial resources of India.A comprehensive register of scientific and technical man-power in the country is being compiled by the Council. Information concerning over 25,000 technicians and scientists has already been collected.

The Council also brings out a monthly publication *Journal of Scientific and Industrial Research* from 1942. The journal publishes research papers, reviews, scientific and technical articles, etc.

An Indian Science News-latter containing current news on scientific and technical work in India is issued fortnightly.

The *Vijyana Pragati* is a monthly journal of scientific and industrial research in Hindi.

National Laboratories—Several national laboratories have come into existence in the country since independence. These institutions offer first-rate facilities for research. There are now ten laboratories spread out throughout India. These laboratories are located near main industries which they are intended to serve. A new feature of the laboratories is pilot plants where the results of research can be tested to determine their commercial value.

(1) *National Physical Laboratory, New Delhi*—It has nine divisions dealing with weights and measures, applied mechanics and materials, heat and power, optics, electricity, electron, sound analytical chemistry and industrial physics.' It was opened on January 21, 1950.

(2) *National Chemical Laboratory, Poona*—The laboratory was opened in 1950 and has eight main divisions devoted to inorganic chemistry, physical chemistry, chemistry of high polymers, organic chemistry, bio-chemistry, chemical engineering and survey, and information administration.

(3) *National Metallurgical Laboratory, Jamshedpur*—was opened on 26th November, 1950. Besides metallurgical research, it will undertake research on ores, minerals and refractories as applied to metallurgy. A noteworthy feature will be the laboratory's collaboration with the Tatas.

(4) *Central Fuel Research Institute, Digwadih, Dhanbad*—was opened on April 22, 1950. The institute conducts research on major problems concerning fuel—solid, liquid and gaseous—and operates a physical and chemical survey of Indian coals, the object being to provide a reliable assessment of the quality and quantity of the various coal resources of the country in order to ensure that they are utilised to the best advantage. In addition to problems of fundamental and applied research, sampling and analysis of coal will be undertaken and pilot-plants are to be developed for various processes.

(5) *Central Glass and Ceramic Research Institute, Calcutta*—was opened on 25th August, 1950. The Institute conducts fundamental research bearing on different branches of glass ceramics. Its other functions will be testing and standardization, technical assistance to the glass and ceramic industry ; dissemination of information and training of technologists for special work. It has carried out research on coloured glass, sintered glass and foam

glass. A survey of glass sands has been conducted in the States and more than 120 samples have been analysed and graded.

(6) *Central Road Research Institute, New Delhi*—was opened on July 16, 1952. It will include the following work—study of the technique of construction and maintenance of roads with due regard to the use of indigenous materials, survey of Indian soils with the object of evolving chief rural roads, investigation of problems of road safety, development of an improved type of rural vehicle which would be less destructive to rural roads.

(7) *Central Food Technological Research Insittute, Mysore City*—It was opened on 21st October, 1950. The laboratory will consist of three main divisions dealing with food processing, food engineering and biochemistry and nutrition and seven subsidiary sections for handling problems in food storage and preservation, food engineering and biochemistry and nutrition and seven subsidiary sections for handling problems in food storage and preservation, food substitute and supplementary foods, raw materials and food survey dietics and field studies, food containers, food adulteration and food sanitation. In 1950, Indian Institute of Food Technology was merged with it. This Division is also charged with the all-India post-graduate diploma course in fruit technology.

(8) *Central Drug Research Insittute. 'Chattar Manzil,' Lucknow,*—was opened on February 17, 1951. This Research Institute has been set up with five main divisions with chemistry, botany, pharmacology, biochemistry and microbiology and clinical science. The Institute is conducting research on drugs which has been used by indigenous systems of medicine for hundreds of years. Medicinal plants and herbs are also being tested. The Institute will also work on synthetic drugs and anti-biotics.

(9) *Central Leather Research Institute, Madras*—was opened in January, 1953. Hides and skins constitute an important item in Indian export trade. To provide proper facilities for research, a full-fledged Central Leather Research Institute has been set up in Madras. Its various sections will deal with leather testing, chemistry, bacteriology, microscopy and physics. The Institute will have a model tannery, a pilot plant and a workshop.

(10) *Central Electro-Chemical Research Institute, Karaikudi (Madras)*—was opened in January, 1953.—Several 'key' chemical industries depend on electro-chemical processes. In fact, some chemicals can not be manufactured economically by other means. This Central Research Institute will thus help the development of the chemical industry. The Institute will have two main divisions—electrolytic and electrothermic. The main object is to foster new chemical industries, to expand the existing ones and also to improve their efficiency.

In addition the following two other national laboratories are being established—

(1) The Central Building Research Institute at Roorkee.
(2) Central Salt Research Institute at Bhavnagar.

Subsidized Research—The Council encourages fundamental and applied research in the universities and other research institutions through grants-in-aid. At present over a hundred research schemes are in progress at these institutions *e.g.*, the Department of Dyestuffs Technology in Bombay University; Quality Control Training Centre at Indian Statistical Institute at Bombay; Leather Research Centre at St. Xavier's College at Bombay; Ionospheric Research Unit at Calcutta University and the Plant Research Unit at Delhi University. The foundation stone of *Electronotics Engineering Research Institute* at Pilani was laid by Pandit Nehru on 21st Sept., 1953 with a capital expenditure of Rs. 21 lakhs given by the Birlas.

Engineering Research—With a view to initiating and co-ordinating research on different engineering subjects, *the Board of Engineering Research* was inaugurated in 1950. The Board is assisted by five expert committees—(1) Civil Engineering Committee (2) Mechanical Engineering Committee (3) Electrical and Radio Engineering Committee (4) Hydraulics Committee and (5) Aeronautical Engineering Committee.

Medical Research—The subject of medical research was the first to receive attention in 1922. *Indian Research Fund Association* was brought into being with the object of sponsoring research in subjects relating to medicine and public health. Among the specialised institutes catering to research and public health, the following may be mentioned :—

(1) Central Research Institute, Kasauli; (2) School of Tropical Medicine, Calcutta; (3) Haffkine Institute, Bombay; (4) King Institute, Guindy, Madras; (5) All-India Institute of Hygiene and Public Health Calcutta; (6) Malaria Institute, Delhi; (7) Nutrition Research Institute, Coonoor; (8) Pasteur Institutes at Kasauli, Shillong and Coonoor.

Agricultural Research—It had its beginning in 1929 with the starting of *Indian Council of Agricultural Research*. The primary function of the Council is to promote, guide and co-ordinate agricultural including veterinary research. The Council's work has been enlarged to include the work connected with the application of the results of research to field practice and to undertake, aid, promote and co-ordinate agricultural and animal husbandry education, research and its application in practice, development and marketing by all means calculated to increase scientific knowledge of the subjects and to secure its adoption in every day practice.

The Council is divided into two parts—governing body which examines all proposals in connection with the scientific subjects. Government contribute financial grants every year and a cess of ½ p.c. *ad valorem* is levied under the Agricultural Produce Cess Act of 1940 to provide funds for agricultural research programme.

The following are the main agricultural Institutes of India—(1) Forest Research Institute, Dehra Dun; (2) Indian Agricultural Research Institute, Delhi; (3) Indian Veterinary Research Institute, Mukteswar and Izzatnagar; (4) Indian Dairy Research Institute, Bangalore; (5) Sugar Research Institute, Coimbatore; (6) Central Rice Research Station, Cuttack; (7) Cotton Technological Research Laboratory, Matunga, Bombay and its sub-station at Indore; (8) Central Jute Technological Research Laboratory, Calcutta; (9) Jute

Agricultural Research Institute, Hooghly, (10) Indian Lac Research Institute, Ranchi ; (11) Central Tobacco Research Institute, Rajamundry ; (13) Bidi Tobacco Research Station, Anand ; (14) Central Inland Fisheries Research Station, Barrackpur ; (15) Central Marine Research Station, Madras ; (16) Deep Sea Fishing Research Station, Bombay, (17) Central Coconut Research Station, Kayamkulain, Travancore, (18) Central Potato Research Institute, Patna, (19) Central Vegetable Breeding Station, Kulu, Punjab, (20) Fruit Research Institute, Sabour, Bhagalpur, (21) Sugarcane Research Station, Poona, (22) Sugarcane Research Station, Shahjehanpur.

Research Associations by Industries—It is a very good sign that industries should organise research independently. So the Council is promoting research on a co-operative basis and research associations are being set up—(1) *The Silk and Art Silk Mills Association* collected Rs. 35 lakhs to establish a research institute for the industry. (2) The textile industry of Ahmedabad has also formed a research association and earmarked Rs. 52 lakhs for establishing a research institute. (3) *South Indian Textile Research Association* is planning a textile research laboratory at Coimbatore.

Atomic Research—The splitting of atoms by some rare minerals generates a tremendous amount of energy which every advanced country is using for the development of defence and industry. India is well-endowed with atomic minerals. In order to use the atomic energy, a Board of Research in Atomic Energy was set up in June 1947. The Board advised the Government to arm itself with powers to deal with all matters connected with the development and utilization of atomic energy for the purposes of peace. The *Atomic Energy Act of 1948* was passed and to give effect to the enactment, the *Atomic Energy Commission* was set up by the Government in 1948. This body functions directly under the Prime Minister and is responsible for training scientists in atomic research. In its educational and scientific work, the Commission is advised by the Board of Research on Atomic Energy and the Cosmic Ray Committee.

Research on specific problems in the Indian sciences and in subjects aiming at the production and development of atomic energy are carried on in Atomic Energy Commission's own laboratories at the *Tata Institute of Fundamental Research* in Bombay, the *Physical Research Laboratory at Ahmedabad, the Institute of Nuclear Physics* in Calcutta and other research institutes and university laboratories.

The Commission has been responsible for the setting up the *Indian Rare Earths Ltd.*, in Travancore-Cochin. This enterprise is owned jointly by the Governments of India and Travancore-Cochin. The factory which was set up at Alwaye in 1952 for processing monazite is managed by the Commission. It will provide India with materials of strategic value. The Commission is now building another factory which will extract uranium and thorium from the waste eliminated by the plant at Alwaye.

Nuclear Research—Pioneering work in the field of Neuclear research was begun by the Tata Institute of Fundamental Research founded in 1945. In addition to training students, the Institute undertakes research on neuclear physics. The Institute of Neuclear Physics was opened in 1950 by Madame Jaliot Curie in Calcutta.

Learned Scientific Societies and Research Institutes—There are many learned Scientific Societies scattered throughout the country. These institutions try to further knowledge in their respective spheres. *Indion Science Congress Association*, started in 1914, provides a common forum for the scientists of the country. Under its auspices, Indian and foreign scientists meet every year to discuss common problems and exchange ideas. *National Institute of Sciences* established in 1935 has been recognised as the premier scientific organisation engaged in co-ordination between scientific academies, societies, institutions and Government scientific departments and services. Other learned societies in various parts of India are—(1) Agricultural and Horticultural Society of India, Calcutta, (2) National Institute of Sciences of India, Delhi (3) Indian Research Fund Association, (4) National Academy of Sciences, Allahabad (5) Indian Academy of Sciences, Bangalore, (6) Mining and Geological Survey of India (7) Mining and Metallurgical Society, (8) India Society of Social Sciences, (9) Entomological Society of India, (10) Horticultural Society of India, (11) Indian Diary Association, Bangalore, (12) Birbal Sahni Institute of Paliobotany, Lucknow, (13) Central Research Institute, Kasauli, (14) Central Road Research Institute, Okhla, New Delhi, (15) Central Water and Power Station, Poona, (16) Drug Research Laboratory, Jammu, (17) Hydraulic Research Laboratories, Poona, (18) Indian Association for the Cultivation of Science, Calcutta, (19) Indian Central Cotton Committee Technological Laboratory, Bombay, (20) Indian Tea Association Research Institute, Tookla, Assam, (21) Ionospheric Research Station, Haringhatta, Calcutta, (22) Oil Technological Institute, Anantapur, Madras.

INDIAN MINERALS

India's Mineral Wealth—The mineral resources of India are not large for a country of its size and population. Only coal, gold, mica, building materials (including constructional stones, limestone, etc.), salt, petroleum, manganese ore, iron ore, copper ore and ilmenite are produced in quantities to be of real importance to industry and other sectors of economy. Of these mica, manganese ore and ilmenite are wholly or largely exported. The important non-ferrous metals are either not produced in India at all or their production is insignificant. Less than 12 per cent of India's requirements of mineral oils is now met by domestic production; the rest being imported. India has however adequate resources of industrial clay, bauxite, steatite, chromite, natural abrasives, magnestic, felspar, dolomite phosphate, vanadium, titanium ore, etc., for its immediate and future needs.

India's Mineral Defects—The distribution of minerals in India is very localised. The main coal-fields are situated in Gondawana region (Bengal, Bihar, Orissa); oil-field is located in Assam. Iron-ores are also mainly centred in one place; other minerals such as borax, sulphur, magnesite, ilmenite, gypsum are scattered far and wide. This sort of scattering distribution of minerals make co-ordination of production and distribution impossible. India lacks the base metals; her known deposits of tin, lead, copper and zinc being modest. But her most serious deficiency is oil. Her production on the Burma frontier is 1·10 p.c. of world's output. Yet it must be said that in some minerals, India holds a record position.

Minerals of Strategic Importance—Minerals of strategic and defence importance can be regarded as adequate in India although in parts only; there is a serious deficiency in munition metals like tungsten, tin, lead, zinc, mercury and also in graphite and liquid fuels. But in the basic metals, iron, manganese, aluminium, magnesium and chromium, the country is well supplied, in the first three in large excess.

Four Categories of India's Mineral Resources.—The mineral resources of India can be divided into four categories—(1) minerals of which India's exportable surplus can dominate world market, (2) minerals of which the exportable surplus forms an important factor, (3) minerals in which it appears the country is at present self-sustaining and (4) minerals for which India has to depend largely or entirely on foreign imports. To the first category belong iron ore, titanium ore and mica, while the exportable surplus under the second head includes manganese ores, bauxite, mangnesite, refractory minerals, natural abrasives, steatite, silica, gypsum, monumental granites, monazite, courndum and cement materials. In the number of minerals including coal, aluminium ore, mineral pigments, sodium salts and alkalies, rare earths, berylium, glass sand, nitrates, zircon and phosphates, the country is known to be self-sufficient. And lastly, the following are the minerals for which it has to depend solely on imports: copper, silver, nickel, petroleum, sulphur, lead, zinc, tin, fluorides, mercury, tungsten, molybdenum, platinum, graphite, asphalt and potash.

Mines and Minerals Conservation—With the achievement of independence, Government of India felt the great need of statutory rules for the conservation of mineral wealth and for the regulation and grant of mineral concessions. Thus the *Mines and Minerals (Regulation and Development) Act* was passed in September 1948. The Central Government assumed the responsibility to co-ordinate the policy of States for mineral development and the issue of leases. The Central Government is also following an active mineral policy to control mining and the consumption of minerals of fundamental and strategic importance.

The Industrial Policy Resolution of the Government of India published in April 6, 1948, explicitly recognised minerals amongst the industries whose location must be governed by economic factors of all-India import or which require considerable investment or a high degree of technical skill and must consequently be the subject of central regulation and control.

Government Departments—*The Ministry of Natural Resources and Scientific Research* deals with (1) mines, (2) geological survey among other subjects. The Geological Survey department was founded in 1846 primarily with the object of geological mapping. This department helps to increase India's mineral resources. It has been publishing various technical records and bulletins giving geological information on commercial and other minerals. Enquiries from industrialists are being answered by its information section.

The activity of the department is also directed to the compilation of geological map of India and to the collection and dissemination of information regarding the mineral resources of the country. The department is responsible for the up-keep and administration of the geological section of the Indian Museum, Calcutta.

The following are also the important departments concerning mining in India—

Mineral Information Bureau has been set up in 1946 to give information and advice to industries. The main function of the Bureau is the dissemination in non-technical language of facts relating to Indian minerals, fuels, iron ore, ferro-alloy minerals, light and base metal minerals, precious metals, gems, minerals for chemical industries, industrial clays, sands and miscellaneous minerals.

Indian Bureau of Mines was created in 1948 to function as a body of expert advisers to the Government of India on all matters relating to mineral development. The Bureau is today the chief national agency for discharging the various duties devolving on the Central Government under the Mines and Minerals (Regulation and Development) Act, 1948. Bureau of Mines will have to inspect mines to effect general improvements in mining methods, plan for the recovery of the largest possible quantity, to conserve mineral wealth, eliminate waste in mining, processing and utilization; use modern methods of prospecting to locate mineral deposits; advise central and provincial governments on questions relating to mineral concessions, royalty rents, taxation, tariff and export policies, provide analytical and testing facilities for producers of, and traders in minerals, etc.

This Bureau consists of following three sections—(1) *Mining Engineering Branch*, (2) *Mines Inspection Branch*, (3) *Mineral Treatment Branch.*

Department of Mines—This department came into existence in 1902 and is mainly responsible for the Indian Mines Act. Headquarters of the department is at Dhanbad. This department is concerned with the inspecting mines, safety of underground workers, wages, etc., and mining education of the country.

A *Mineral Advisory Board* was set up during 1953. The Board will *inter alia* review the production, distribution, consumption and export of minerals. It will also advise the Government on the export and import tariffs on minerals and mineral products.

Scientific Surveys—*History of the Geological Survey and its activities*—The Geological Survey of India, the department that looks after minerals of India celebrated its first hundred years in 1951. During that period, it has not only added materially to our knowledge of minerals of economic value, and so to the potential and actual wealth of the country, but extended the bounds of research into the science of the earth.

During its long history, the Geological Survey has been devoting its energy in the scientific geological survey of mineral deposits for the detailed knowledge of the geology of the different areas with the estimation of their quantity and quality. Further, geological survey has had as one of its main objectives the preparation of a Geological map of India and except for a few unmapped areas in Orissa, Bastar, Assam and parts of Himalayas, the geological map of India has now been completed on one scale to another.

On the purely scientific research side, its discoveries have often had significance that has extended beyond the boundaries of India—(1) the discovery that glacial boulder beds and peculiar fossil glossopteris flora were common to S. America, S. Africa, India, Australia and Antarctica led to the conception of a great southern continent of Gondawana land covering what is now partly sea, (2) three main types of wave motion occur during an earthquake, (3) wonderful variety of fossil mammals buried in the Siwalik hills and in the mountains of Baluchistan, (4) Great advances towards the knowledge of the Himalayas revealing the complicated structure of the great mountain.

The Department's work is now organized in three main divisions. The first consists of the Field Circles, which are responsible for detailed mapping and for all preliminary investigations of mineral deposits, water supply and engineering problems. The second consists of the Technical Sections maintained at Calcutta headquarters; the Chemical, Petrological, Palæontological and Palæo botanical laboratories, the Geophysical Workshop, the Drawing Office, the Mineral Information Bureau, the Statistical Section and the sections responsible for general administration. The third consists of the Specialist Sections, which are available for work in any part of India. These sections are responsible for advanced studies in engineering geology and water supply and for detailed testing of mineral deposits by geophysical methods, drilling or exploratory mining. These three divisions naturally work in close collaboration. When the mineral deposits of an area have been generally appraised by the Field Circles, and found promising, detailed testing by one or other of the Specialist Sections is carried out.

Mining Education—*The Indian School of Mines and Applied Geology* opened in 1926 at Dhanbad imparts high grade technical training in Mineral Engineering and Applied Geology and offers a four-year diploma course in these subjects. The school has been thoroughly reorganised on the recommendations of the Reorganisation Committee. The new curriculum lays special emphasis on subjects like metallurgy, fuel technology, refractories and ceramics.

National Mineral Policy—The Industrial Policy Resolution of the Government of India published on April 6, 1948 explicity recognised minerals amongst industries whose location must be governed by economic factors of all-India import or which require considerable investment or a high degree of technical skill and must consequently be the subject of central regulation and control.

Three major steps have since been taken to put the new policy into execution. A five-year expansion programme for the Geological Survey of India envisages a considerable increase of its staff and range of work. The strength of 150 geologists is to be increased to 275 during five-year period. The cost of expansion is estimated at one crore of rupees.

The Dhanbad School of Mines and Applied Geology has been reorganised to turn out a larger number of technicians every year. In March, 1948, the Indian Bureau of Mines was created to function as a body of expert advisers to the Government of India on all matters relating to mineral development. In September, 1948 the Indian Parliament gave its assent to a historic measure—the Mines and Minerals (Regulation and Development) Act, 1948.

The Act applies to all minerals, including oil. It extends to all States, including Centrally-administered areas. It gives powers to Central Government to frame rules for the regulation of the terms and conditions of prospecting licences and grant of leases, for the conservation and development of minerals, and for the modification of existing licences and leases on payment of compensation. The ownership of mines and minerals continues to vest in the States, and State Governments will continue to grant concessions and collect royalties and rents as hitherto. But this will now be done within the framework of the general control exercised by the centre and the rules framed by the Central Government.

DESCRIPTION OF MINERALS

Coal—is the most valuable mineral product and India stands eighth in the world. The bulk of Indian coal is concentrated in one enormous series of deposits known as 'Gondwana system.' A little over 98 p.c. of Indian coal is raised from Gondwana coal beds and about 2 p.c. from tertiary beds. This system stretches across Bengal, Bihar, Orissa, Central India and Madhya Pradesh and Hyderabad. The tertiary beds are found in Assam and Rajasthan. A little coal is produced in Hyderabad. Bengal and Bihar coalfields are the sources of the best varieties of coal and it is also the only source of varieties of coal which can he used directly for metallurgical purposes. The coal found, broadly speaking is of four types. Peat, lignite, bituminous and anthracite. The coal-fields of Bihar and West Bengal account for about nine-tenths of India's output. Jharia and Raniganj are the principal coal-fields and from them about 70 p.c. of total output is obtained. Jharia coal-field produces the best Indian coal. In Hyderabad, the principal coal field lies in Singarani, 146 miles from Hyderabad. Largest market for Indian coal is home market.

The total reserves of coal down to a depth of 2,000 feet are estimated at 6,500 million tons. of which the 'actual reserves' (*i.e.*, those which are proved or considered beyond reasonable doubt to exist) are 4,987 million tons and the rest are 'probable reserves.' Reserves of good coking coal has been estimated at a little over 16,000 million tons.

Coal mining as a commercial enterprise may be said to have begun in 1774 in Raniganj field. In Bengal and Bihar Zamindars had the power to grant mining leases. There was no uniformity in royalty resulting often in unfair competition between collieries. The situation called for statutory resolution. In 1948 the Indian Parliament passed Mines and Minerals (Regulation and Development) Act. The Mining Concessions Rules 1949 issued under the Act come into force on October 25, 1949.

There are three types of collieries : Large collieries privately owned, small collieries privately owned and large collieries State owned.

Great improvements have been made by the Government on the conditions of labour—such as, a *compulsory provident fund scheme* which will provide for about 250,000 coal miners in old age, has been brought into force by the Government of India. *A Coal Mines Labour Welfare Fund* was constituted in 1944 which provided for the levy of cess on coal and coke despatched from collieries. A *Standing Industrial Tribunal* for coal areas has now been constituted by the Government of India to deal with disputes which are within the jurisdiction of the Central Government.

Following important points are to be noted with regard to coal enterprise in India : (1) The Central Government have declared the coal industry a public utility service. (2) *Per capita* production in India is far lower than in some western countries. (3) Indian Railways consume the largest amount of coal in India.

India has now nearly 1,000 coal mines. The total output of coal at present is in the neighbourhood of 34 million tons. Of the total production Bihar accounts for 55 per cent., Bengal 28 per cent., M.P. 6 per cent., Hyderabad 4 per cent., etc.

In India nearly one-third of the total production is used up by the railways and bunker and steamer service. Other important consumers are the metallurgical industries (13·5 p.c.), collieries (11 p.c.), ceramic industries (9·5 p.c.), steam and electric utilities (7 p.c.) and the manufracturing industries (8·5 p.c.).

A Fuel Research Institute at Digwadih, near Jharia has been started in 1949. The function of the Institute is to make survey of Indian coals and to carry out researches on processing with a view to manufacturing metallurgical coke and investigation on low-temperature carbonisation and tar distillation for dyes, drugs, plastics, explosive and synthetic liquid fuels.

Stowing in Mines—Stowing is a process in mining operation particularly in coal mining in which any of the void created by the extraction of coal is filled with stowing material. The purpose of such operation is safety to the men working in the mine which prevents premature collapse, surface subsidence, underground fires, expulsion of inflamable gas from open graves, which might result in an explosion. In 1941 Coal Mines Stowing Board was formed. It undertook to supress the fire both in Jharia and Raniganj coal fields.

Government of India have appointed a *Coal Board* to deal with all problems relating to coal from a comprehensive points of view. It has enforced the stowing, blending and washing of coking coal. Coal Board is also taking steps to bring about mechanisation of industry.

Manganese—Next in importance to coal is *manganese,* one of the key metals. Its chief use being in the manufacture of steel. It is also extensively used in the chemical industry and in making of dry cell batteries. India is third among the countries producing manganese—U.S.S.R. and Gold Coast being first and second respectively. The manganese reserves are now estimated to be at least 60 million tons. Most of the exports go to U.S.A. Deposits now being worked are in Singhbhum (Bihar), Panchmahal (Bombay), Balaghat, Bhandara, Chhindwara, Nagpur (Madhya Pradesh), Indore (Madhya Bharat). Visakhapatnam, Sandur (Madras), Shimoga (Mysore), Bonai, Keonjhar, Koraput, Patna State (Orissa) and Banswara (Rajasthan). Madhya Pradesh produces more than 60 p.c. of the ore in India. Principal customers of manganese are United Kingdom, France, U.S.A., Norway, Canada and Belgium.

Lignite—is a soft brown type of coal retaining the texture of wood from which it originated. From it are obtained a number of valuable products, among them being petroleum and diesel oils, waxes and hydrocarbon gases. Lignite quarry is situated at Neiveli in South Arcot District. It is 24 miles from Cuddalore and about 135 miles south-west of Madras. Lignite, though a member of the coal family, is different from commonly used bituminous coal in that it contains a relatively high proportion of moisture. In the S. Indian lignite, this proportion is computed at 30 p.c. to 35 p.c.

Gold—takes the third place which in India, is mined in the State of Mysore in Kolar where 95 per cent. of India output of gold comes. India's production of gold is only about two per cent. of the total world production (excluding U.S.S.R.) Alluvial gold is found with sands in some of the rivers of India—such as rivers of Singhbhum, Orissa etc.

Mica—Fourth place is occupied by *Mica.* India is the biggest supplier of mica and is responsible for three-quarters of the world's production of block and sheet mica. Bihar belt is the oldest and the most important of the areas producing mica in India. The best variety of mica, *viz.,* Bengal Ruby mica comes mostly from the Bihar mines which are scattered over Hazaribagh and Gaya districts of Bihar. The second mica belt is in the Nellore district of Madras and third belt is Rajasthan, chiefly in Jaipur and Udaipur. The main use of mica is for the electrical and technical industries. The next important use of mica is in the shape of micanite by electrical engineers, colliery companies, manufactures of iron, steel and electrical apparatus. Waste and scarp mica is ground and used for wall-paper industry, manufacture of paints, rubber industry etc. The average annual export of mica from India is 11,250 tons valued at Rs. 217 lakhs.

Petroleum—is the last of five minerals of India. India contributes only 1·10 per cent. of the world's production. Almost the whole of the petrol demand is met by the import of finished products. The production comes from the Digboi field of the Assam Oil Company in Assam. This covers an area of 2½ sq. miles. About 74 p.c. of India's requirements of petrol comes from Persia, while the indigenous production amounts to 8 per cent. The other countries from which India gets her petrol are Bahrein Islands, Saudi Arabia and the Far East. Though there is shortage of petrol production in India, Government of India entered into an agreement with the Standard Vaccum Oil Company for the setting up of a new refinery in Bombay and this was followed very soon by an agreement with the Burma Shell group of companies for another refinery in the same place. Another negoliation has been completed with Caltex Oil Company for the setting up of a refinery.

Iron—Extensive deposits of iron ore occur in several parts of India, namely, Bihar, Orissa, Madhya Pradesh, Mysore and Madras. Of these, the deposits in the Singbhum district of Bihar and in the adjacent areas of Bonai, Keonjhar and Mayurbhanj, which have now merged with Orissa, are the most important, being the largest in extent as well as richest in iron content. The estimated iron reserves are as follows :—*Singbhum* and *Orissa*—8,000 million tons : iron content 60-68 p.c. *Drug Dist.* (Madhya Pradesh)—175 million tons : iron content 60-68 p.c. *Chanda District* (Madhya Pradesh)—30 million tons : iron content 60-68 p.c. *Mysore*—150 million tons : iron contents 55-65 p.c. *Madras* (Salem District) 305 million tons : iron content 35-40 p.c.=total 9,270 million tons. So it will be seen that iron content in Indian ore is about 68·7. Few, even amongst the greatest production countries of the world can claim a higher percentage.

Salt—Salt is one of India's ancient industry. The country was not self-sufficient in salt and had to depend upon imports. This dependence was accentuated by the loss of the extensive rock salt deposit in West Punjab and the marine salt works of Sind as a result of partition. But by the beginning of the year 1951 she claimed to be self-sufficient in all qualities of salt, with the exception of rock variety. In addition to meeting domestic demands, India now exports salt. Salt is produced by solar evaporation on almost all the coasts of India, but particularly on the south west and near Bombay. The principal salt producing areas are located in Saurashtra, Madras, Bombay, Rajasthan, Kutch, Travancore-Cochin and Orissa. Partition left the Indian Union with only one source of rock salt—at Mandi in Himachal Pradesh. Besides the existing model farm and Salt Research Station at Wadala in Bombay, a

Central Salt Research Station was established in 1952 at Bhovnagar in Saurashtra under the control of the Council of Scientific and Industrial Research.

Ilmenite—One of the most striking features of India's mineral industry is the rapid rise in the production of *ilmenite*. India has now become the world's leading producer of this metal. It is the whitest of all substances and will replace lead more and more in the manufacture of white pigment. The mineral occurs in the "Black Sand" of the beaches near Cape Comorin, the southernmost point of India and Bombay.

Monazite—is available on the beach sands of Travancore-Cochin State existing in the form of beach sands in association with ilmenite and are perhaps the largest and the richest in thorium in the world and also contain a small quantity of uranium. In order to conserve supplies for atomic energy development, exports are now prohibited under sec. 3 of the Atomic Energy Act XXIX of 1948. About 88 p.c. of this mineral is supplied from India.

Zircon—is also available on the beach sands of Travancore and Cape Comorin. Zircon yields zinconia, a high grade refractory and also an alloy material.

Zinc—Zawar mines in Jodhpur are the only important source of zinc ore in India and there are sufficient indications to show that large resoures of workable ore may be found here. India's resources are however poor.

Beryl—is found in small quantities in certain rocks which contain generally mica mines. India has been a large producer of beryl, chiefly from Rajasthan and Bihar mica mines.

Chromite—India has only moderate resources of chromite ore. The more important deposits are distributed as follows—Singbhum & Bhagalpur (Bihar), Ratnagiri (Bombay), Salem and Kistna (Madras), Mysore, Hassan, Kadur and Chitaldrug (Mysore), Keonjhar (Orissa), Ladakh (Kashmir). Th edeposits are being worked at present only in Singbhum, Keonjhar, Kistna, Mysore and Hassan districts.

Magnesite—is valuable to cement, glass paper, rubber, cosmetics, refactories and aircraft industries. India's magnesite deposits are in the states of Bihar, Kashmir, Madras, Mysore, Rajasthan and Uttar Pradesh. By far the largest and the best magnesite deposits in India occur in the Salem district of Madras.

Bauxite—India has vast deposits of good bauxite scattered all over the country, major occurances being in Bihar, Bombay, Madhya Pradesh, Orissa and Kashmir. It is believed that the total known reserves of bauxite is 250 million tons of all grades. It is largely used as filtering material in petroleum refineries and for the manufacture of alum. High grade bauxite is also used for producing aluminium.

Cement—The ingredients of cement are all available in abundance in India. The principal cement producing centres are Porabandar in Kathiawar, Katni in M. P., Lakheri in Rajasthan, Jabalpur in M.P., Bihar, Guntur in Madras, etc.

Kyanite—India is the principal producer of Kyanite, the most important of the minerals used in the refractory and ceramic industries. Good workable deposits of kyanite occur in Seraikela and Kharsawan in Singhbhum district, Bihar. Smaller deposits are also known to occur in the Mayurbhanj district of Orissa, in the Nellore district of Madras and in the Hassan district of Mysore. The Lapsa Buru deposit of Kharsawan is the largest of its kind in the world and is the principal centre of production.

Copper—ores in India mainly occur in the Singhbhum and Baragunda of Bihar. Here the mine is worked by Indian Copper Corporation. About 370.000 tons of copper ore are being mined annually in Singhbhum, Bihar, but the production meets only a fraction of India's demands.

Limestone—used principally for the manufacture of cement and for constructional purposes and also as a flax in melting of iron and lead ores, is found in Rhotasgarh in Sahabad district of Bihar, at Katni in M.P. in Bundi, Jodhpur, Sirohi in Rajasthan, in Rewah and Mahiar State of Madhya Bharat.

Tungsten (Wolfram)—is known to occur in a few localities in West Bengal, Bihar, Madhya Pradesh, Madras and Rajasthan. Of these only the deposits at Degana in Rajasthan are promising.

Bentonite—is a valuable clay similar in its properties to fuller's earth. It occurs in limited quantities in Rajasthan, Jodhpur and Karauli and in Jammu Province of Kashmir.

Gypsum—Gypsum sources in India have been estimated at 85·5 million tons, lying in Bikaner and Jodhpur (Rajasthan), Trichinopoly (Madras), Saurashtra and Himachal Pradesh. Large quantities of gypsum have recently been discovered in Jamsar (Rajasthan) and Ran (Saurashtra). Gypsum is extensively used in cements and plasters, as paints and filters and as 'top-dressing, in agriculture.

Sulphur—There are no known deposits of elemental sulphur in India. Reports of occurrences in Assam and Ladakh (Kashmir) require geological investigation. Assam coal is said to have a high sulphur content. It was reported recently that the Fuel Research Institute at Digwadih has found Rewa coal also rich in sulphur.

Steatite—is also known as soap-stone, pot-stone, talc and in its powdered from as 'fresh chalk.' It is one of the most variously used industrial minerals. It is available in Rajasthan and Madras.

Lead—Zawar mines in Udaipur and Banjari mines of Jaipur are the only important source of lead in India.

Vanadium—bearing titanic ferrous iron ore deposits occur in the Singbhum district and in Mayurbhanj. It is not at present being worked in India.

Sillimanite—is a mineral of rare occurance which is used in the manufacture of furnace lining in the iron and steel and glass and ceramic industry, is almost a monopoly of India. Deposits of sillimanite are known to occur in Assam, Madhya Pradesh and Rewa. The largest concentration of Sillimanite being in the Khasi hills where the known reserves exceed 2½ lakh tons.

China clay—Deposits of China clay occur and are worked in Bihar, Assam and Bombay, Hyderabad, Madras, Mysore and Travancore. The Travancore deposits are most important. The cotton textile industry is the principal user of china clay in India.

Graphite—occurs in small quantities in various parts of India, namely Ajmer, Hyderabad, Madhya Pradesh, Madras, Mysore, Orissa and Travancore. During recent years deposits have been worked in Madhya Pradesh, Mysore and Orissa only.

Precious Stones—Actual diamond mines are in the State of Panna, Central India, *Sapphires* of a very clear blue colour are obtained in Kashmir at an altitude of 14,000 ft. *Garnets* of a rich deep purplish red are found in Barwar District in Kishengarh State and the adjoining tracks of Jaipur State.

Base Metals—India is singularly poor in deposits of *base metals*—tin, lead, zinc and copper. The tin occurs in the mica belt of Bihar and are of no practical importance. There is one area in which copper mining has been conducted—the copper belt of Singhbhum, Bihar.

Miscellaneous Minerals—Of the other minerals useful in industy India is already producing *gypsum* (Kashmir, Madras, Punjab, Rajasthan, U.P.) ; *Steatite* (Guntur in Madras, Bihar, Central India. Madhya Pradesh and Uttar Pradesh, Eastern States, Mysore and Rajputana); *Fuller's earth* (M.P., Punjab and Rajasthan); *Barytes* (Madras and Rajasthan); *Ochres*, (Central India, Madhya Pradesh, Eastern States, Madras, Orissa, and Rajasthan); *Graphite* (Mysore, M.P., Madras, Eastern States) ; *Tungsten ore* (Jodhpur State) ; *Asbestos* (Eastern States, Mysore and Rajasthan); *Felspar* (Mysore and Rajasthan); *Garnet Sand* (Madras); *Bentonite* (Jodhpur); *Aptatite* (Bihar and Madras); *Tantalite* (Monghyr in Bihar).

MINERAL PRODUCTION OF INDIA

	Gold (ounces)	*Iron ore* (000 tons)	*Manganese* (000 tons)	*Mica* (000 tons)	*Copper ore* (tons)	*Ilmenite* (tons)	*Building materials* (value Rs. 000)
1947	171,705	2,498	451	136.308	323,035	260.955	3,58,14
1948	180,430	2,285	526	151.273	322.282	229.416	3.16,28
1949	164,204	2,809	646	151.709	329.304	308,180	3.00,31
1950	196,925	2,965	883	162,447	360.308	312.663	4,15,00
1951	226,357	3,657	1,248	197,523	369,057	219,568	4,35,75

(*Monthly Abstract of Statistics, July, 1953*)

INDIAN PORTS

The earliest recorded history and literature of India contain frequent references of flurishing ports on the coast line of India, to which traders came from far off-lands. It is only at the beginning of the 17th century that we come across references in recorded history to the ports of Bombay, Calcutta and Madras. It is again in the late 19th century that the ports of Bombay and Calcutta came into being in the first decade of the present century. Two more major ports were added to the coast line at Visakhapatnam and Cochin in the thirties of this century. A sixth major port is being constructed at Kandala on the coast of Kutch. In addition to the major ports, India has over 200 minor ports distributed along her long coast line, the essential differences between major and minor ports being that the former can accommodate deep-draft modern ships against alongside berths and handle over 500,000 tons while the minor ports are mostly roadsteads, where ships have to anchor some distance from the coast and goods are handled by means of lighters or country boats. Under the Constitution, the responsibility for major ports vests in the Central Government, while all other ports are within the executive responsibility of State Governments.

Indian Ports—India, for all her size and length of coast line, has only five developed major ports, Bombay, Cochin, Vizag, Madras and Calcutta. The first three provide natural harbours. Madras has an artificial one barely protected from weather particularly during October and November when cyclones prevail. Calcutta lies at the head of a 120-mile-long turbulent river which has a wide range of tides to which deep-drafted ships have to suit themselves. A sixth, Kandla in Cutch, is still in the process of being developed. An ambitious scheme coming within the framework of the forty-crore ten-year Port Development Plan of the Transport Ministry seeks to develop these ports and provide for general expansion, modern mechanical methods of off-loading, installations for carrying out ship-repairs and dry and wet docks. The Port Trusts and Ports (Amendment) Act passed in July 1951 aims at achieving uniformity in Port administration with a view to bringing about a greater measure of Central control and supervision in methods of policy and effecting a considerable degree of centralisation of authority in matters of day-to-day administration in the major ports of Calcutta, Bombay and Madras.

Minor Ports—The minor ports of India number 226 and they dot our Indian coasts from Lakhpat in the Rann of Cutch to Chandbali in the Bay of Bengal. Facilities provided at some of them vary from nothing at some open roadsteads to five elaborate harbours in Saurashtra with dredging equipment ; while some handle only a few hundred tons per year, there are others through which as much as five lakh tons pass. They range in income also, from a few hundred rupees to six or seven lakhs a year. The Report of the Special Officer appointed by the Government of India in 1951 is as follows:—(1) unified action and a uniform policy which was not possible in the old set up, (2) proper dredging of entrances and approaches to ports, (3) use of small-sized steamship on the coastal trade, (4) a hydrographic survey of ports, gulfs, creeks and river mouths with particular reference to exploring and expanding navigation on inland waters and (5) creation of Central Port Organisation with a view to maintaining co-ordination and port technical advice.

Port Trusts—of the five major ports, Calcutta, Bombay and Madras have for long been under the management of Statutory Port Trusts and the ports of Visakhapatnam and Cochin are directly administered by the Central Government through Administrative Officers. Port Trusts enjoy a large measure of autonomy in day-to-day affairs but are subject to the overall control of the Central Government exercised in terms of a Port Trust Act governing each of the three ports. The Port Trusts and Ports (Amendment) Act was passed in 1951 to bring about uniformity in port administration and to ensure greater Central control and supervision in matters of policy. Its other object was to effect decentralization of authority in the existing administration of the major ports at Calcutta, Bombay and Madras. Further a *National Harbour Board*, consisting of the representatives of the Government of India, the marine states and major port authorities, was constituted in 1950 to advise Government on the general policy relating to the development of ports, specially the minor ones.

National Harbour Board—The Government of India have announced the formation of a National Harbour Board in 1950, to consider and advice the Government on important problems relating to the administration and development of ports and harbours in the country. The Board will, for the present, be composed of representatives of the ministries concerned of the Government of India, State Governments and of the major port authorities and will have at its chairman the Minister for Transport and Railways. There will be 18 members on the Board. The National Harbour Board will constitute the principal forum for discussing common problems relating to ports in their specialised aspects such as the need for technical personnel and equipment, the pooling of technical knowledge, the method of control and administration, laws relating to ports and their financial position etc. The Board will also pay due regard to the effects of changes in port policy generally in industry, trade and railways.

Port Development—The present capacity of the five major ports of Calcutta, Bombay, Madras, Cochin and Visakhapatnam to handle cargo is about 20m tons per annum excluding petroleum, country-craft and bunkers. This capacity is not sufficient to meet the demands of traffic. Again, port development is necessary for the following other reasons :

(i) The need for rectifying the consequences of partition and providing a natural outlet for traffic previously catered for by Karachi.

(ii) A large part of the equipment of ports is now antiquated and obsolete.

(iii) The Central Government have undertaken to provide port facilities for the petroleum refineries proposed to be set up at Bombay.

These requirements have been kept in view by the Planning Commission in making its recommendations. For Kandla port which would take over the traffic formerly handled by Karachi the cost during the Plan periods is estimated at Rs. 12·05 crores. A sum of Rs. 8 crores is recommended to be spent for creation of port facilities for oil refineries and of alternative facilities for the existing establishments of the Butcher Island. For the modernization and development of the five existing major ports—Bombay, Calcutta, Madras, Vishakhapatnam and Cochin—the Commission has recommended that the Government should advance loans to the extent of Rs. 12 crores during the Plan period. This loan would be supplemented by the resources of the Port authorities which have been estimated at Rs. 15.5 crores during the same period.

Government's Plan for the Development of Ports—The highlights of this programme are: (1) the extension of the major ports of Bombay, Calcutta, Madras and Cochin; (2) expansion of the shipbuilding yards at Visakhapatnam and construction of new ones at Bombay, Calcutta and Cochin; (3) establishment of shipping corporations for handling India's coastal and overseas trade; (4) development of new ports to serve ocean-going liners; and (5) establishment of naval bases at strategic points on the coast and on the island possessions around India.

Top priority is given by the Indian Government to the Rs. 250,000,000 project for the expansion and modernisation of the major ports.

Indian ports to-day handle about 20,000,000 tons of cargo annually. The projects now under way will increase their capacity to 26,000,000 tons. The ports, which are administered by semi-autonomous trusts, fetch an annual revenue of nearly Rs. 150,000,000. Indians major ports handle an average of 7,000 ships, coastal and ocean-going, every year.

The Rs. 25,000,000 shipbuilding yard at Visakhapatnam will be the main Indian shipbuilding centre.

The Government propose to construct a dry dock for ocean-going liners besides expansion of existing building facilities and improvements to the Port of Visakhapatnam.

Visakhapatnam and Cochin will be India's major naval centres. Bombay will continue to be the operational head quarters of the Indian Navy, while naval stations at Madras and Calcutta will be expanded in the next few years. Bombay's shipbuilding yard is to be located as Bombay, about 18 miles north-east of the port.

Indian Government is also planning the conversion into modern ports of some of the numerous minor trade centres littered all along the country's 3,200 mile coast line.

DESCRIPTION OF PORTS

Kandla—With the loss of Karachi after partition, there is no big port along 1,000 mile-long coast line between Bombay and Karachi to serve vast hinterland. So in 1948 the Government of India accepted the recommendation of the West Coast Major Port Development Committee that Kandla in Cutch State on the northern shore of the Gulf of Cutch where Kandla Creek forms a good natural deep-water harbour, should be developed as a major port to serve central and north-west India and to relieve the pressure on Bombay. The geographical position of Kandla is best suited to replace Karachi in its service to hinterland. Delhi is 656 miles from Kandla as against 783 miles from Karachi. The Kandla port project is under the immediate control of a high-power organisation under a development commissioner. There will be four cargo berths for ships upto 600 feet in length, passenger berths for coastal traffic between Bombay and Karachi and for ferry services across the gulf, a basin for country craft and lighters, an oil birth for tankers upto 32,600 tons (d. w.) and a small concrete floating dock.

To open the hinterland, a metre-gauge railway line is being built upto Deesa in the north of Bombay State on the Western Railway, about 174 miles distant. The foundation stone of the harbour works was laid by the Prime Minister of India on Jan. 10, 1952.

Bombay—Bombay is the natural outlet for India's trade with the west. It is strategically situated in the middle of the west coast of the country, thus enabling it to draw up a vast hinterland extending beyond the uplands of the Deccan to the fertile Indo-Gangetic plain and it is close to Aden and the Suez Canal as any other west coast port. The affairs of the port are under the supervision and control of the Bombay Port Trust, consisting of a Chairman appointed by Government and twenty-one members elected and nominated. The harbour, which is one of the safest and the most spacious in the world, covers 75 square miles and provides secure and ample shelter for shipping at all seasons of the year, being 14 miles long, 4 to 6 miles wide with a general depth varying from 22 to 40 feet. There are three enclosed wet docks and two dry docks. Besides the enclosed docks there are situated along the harbour, a number of 'Bunders' or open wharves and basins where the traffic carried by coasting and country craft and "overside" cargo from the docks and stream is handled. Seeds, hides and skin, cotton, oil cakes, piecegoods, food grains turmeric, ores, tobacco are chief exports.

Madras—is the third largest port of India, controlled by a statutory body, the Madras Port Trust. It was an open roadstead with surf-beaten coast line, but the present harbour has been formed by two concrete walls projecting into the sea so as to enclose a space of about 200 acres with an entrance which gives a depth of 37 feet at high-water and 34 feet at low-water. It is well served with rail and road communications, has a modern airport, and the Buckingham Canal which links the city with the tobacco-growing areas, brings large tonnages for export down to the city.

Most important problem for Madras Port Trust is the sand movement which is shoaling up the entrance of the Harbour. The extension of existing sand screen by 300 feet has been undertaken to avoid this shoaling.

The chief imports into Madras are rice, and food grains, coals, oils, manures, papers and stationery, timber, sugar, dyeing and tanning substances, metals, glass and glassware, chemicals, hardware, machinery, motor vehicles, cycles and accessories, cotton manufactures, provisions, railway plant and rolling stock, etc.

Calcutta—is situated on the Hooghly river and is the clearing centre for the whole of the trade, both inward and outward of North-eastern India, where it forms the terminal of railway, road, and inland waterways systems and for ocean-going and coastwise-shipping. Ships of 15,000 tons can enter the port where there is a jetty and mooring accomodation. A maximum draught of 30 feet is available at certain times of the year. There are moorings in the stream available for 60 ocean going vessels ; 30 vessels can be accomodated at Kidderpore Docks ; and 14 at King George's Dock. Calcutta suffers from the inevitable disadvantages due to its location several miles inland, on the bank of the estuarine Hooghly, which is subjected to strong tides and bores from the sea to a distance of 160 miles upstream. Calcutta's shipping is at the mercy of the tides. The ships can enter and clear only at a fixed hour corresponding with the tides. The pilotage on the Hooghly, one of the most difficult waterways in the world was under the direct administrative control of the Government of India till May 16, 1948 when it was handed over to the Calcutta Port Commissioners for administrative reasons. The port serves the great jute, tea and coal industries, the wheat and seeds traffic of Bihar and the Uttar Pradesh and generally the agricultural areas tapped by the main lines of Eastern and North-Eastern Railways and by numerous waterways connecting the delta with the interior of Bengal and Assam. Through Calcutta passes roughly one-half of the total sea-borne traffic of India.

The traffic through Calcutta averages about eight million tons per year and is tending to increase.

Cochin—Is .a major port on the Malabar coast of India, 580 miles from Bombay. It is a fine natural harbour. It is a port with 125 square miles of sheltered navigable backwaters hidden behind the narrow opening to the sea. Even in the worst monsoon weather, vessels can lie comfortably in the harbour and carry on landing and shipping operations. The system of backwaters running parallel with the coast affords cheap transport and excellent water-ways connecting several places of importance in the Cochin and Travancore States. The port of Cochin serves most of the Malabar and Travancore-Cochin area and is an important nerve centre of commerce and trade. Its hinterland is rich in natural produce such as pepper, cardamons, tea, coffee, rubber, timber etc. Other products of the area are mangalore tiles, coir and coir products and lemon grass oil. The port, which includes the Willingdon Island, is situated in an area femous for its system of backwaters and inland waterways. The entrance channel to the harbour gives access to about 120 square miles of navigable backwaters.

Cochin port is directly administered by the Ministry of Transport of the Government of India through the Administrative Officer assisted by an Advisory Committee.

Visakhapatnam—is the only landlocked and protected port in India and is situated about midway between Calcutta and Madras. This also happens to be the only port administered by Railway in India. Owing to a hill-range bordering the sea, harbour remains concealed from the vessels plying on the ocean outside. This fact added much to its strategic importance. In October 1933, the port was opened to occean-going ships. The principal articles of export from the port are manganese ore, bunker coal, tobacco, myrabalan and oilseeds. Exports are much larger than imports since the port does not serve any large consuming area, while two thirds of its exports are made up of manganese ore, most of which comes from Madhya Pradesh.

The port is controlled by the Government of India, Ministry of Railways (Railway Board).

It is now the centre of ship-building industry in India where Scindia Steamship Company first established ship-building yards which is now being jointly owned by the Government and the Company. Foreign imports are directly received from foreign ports. It is a natural harbour. The ship-yard can build occean-going vessels with a maximum length of 550 ft. and a maximum carrying capacity of 12,000 tons cargo.

Tuticorin—This port is open all the year round and has next to Madras and Cochin the largest trade in southern India. The harbour is so shallow that steamers anchor about 5 miles from the shore and continuous dredging is necessary to keep the channel open between the sea and roadstead. A Port Trust was formed in 1924. There is a considerable trade with Ceylon in rice, pulses, onions, chillies and livestock.

Bedi—Principal port in the State of Nawanagar is Bedi Bandar, situated a few miles from the city of Jamnagar, at the head of a tidal creek some eight miles long, near the mouth of which is the roadstead called Rozi in which ocean-going vessels lie at anchor.

Okha—is situated in a detached portion of Baroda far distant from its main territories in Gujerat. It lies in a strategic position at the extreme north-east point of the Kathiawar peninsula readily accessible to all steamers tiding along that coast. The port is available even to large ships at all states of trades and at all seasons of the year.

Bhavnagar—Half way up the Gulf of Cambay on its western side lie the port and town Bhavnagar. Bhavnagar is situated on a creek several miles from the open waters of the Gulf.

Surat—situated 14 miles from the sea with which it is connected by a river navigable only by small country craft. Surat was one of the earliest and most important of the East India Company factories. But the trade of Surat has considerably declined due to the rise of Bombay port.

Mangalore—is a tidal port served chiefly by backwater communication with hinterland. The backwater of Mangalore is 3½ miles long and 2,000 ft. wide. The hinterland of Mangalore consists of South Canara, Coorg, and the Malnad districts of Mysore State. Mangalore is the north-western terminus of Southern Railway. The chief exports to Europe are pepper, tea, cashew kernels, coffee, sandalwood from Mysore, rice, salt fish, dried fruits, fish manures.

Calicut—is some 42 miles from Tellicherry and 90 miles from Cochin. The port is practically closed during the south-west monsoon from the end of May until the latter half of August. The principal exports are coir, coir fibre, copra, coffee, tea, pepper, ginger, rubber, groundnut, raw cotton and fish manure.

Alleppey—is the premier port and commercial centre in Travancore and is situated about 35 miles south of Cochin. A canal connects the port with the interior backwater. It possesses a roadstead affording safe anchorage during the greater part of the year. The chief exports are copra, coconuts, coir fibre and matting, cardamons, ginger and pepper.

Quilon—is the Coilun of Marco Polo. It is conected with Alleppy by backwater. The chief industries are cotton spinning and file manufacture.

Dhanushkadi—is the terminus of Southern Railway, on the S-E. extremity of the Island of Rameswaram at the junction of Palk Strait with the Gulf of Mannar and connected with Talaimannar in Ceylon.

Negapatam—is the chief port in the Tanjore District about 13 miles south of Karikal. Numerous sailing craft trade between this port and Ceylon.

Karikal—is a French settlement covering an area of 53 square miles and a sea board of 12 miles and is almost surrounded by Tanjore district. The chief traffic is rice, betelnuts, matches, fireworks and kerosene oil.

Pondicherry—is the capital of the French settlements in India, is situated on the Coromandel Coast, 104 miles south of Madras. The roadstead possesses a good anchorage. Pondicherry is the centre of the export trade in groundnuts from French Territory and adjoining Indian districts to Marseilles.

Bhatkal—is ideally situated to meet the needs of Mysore. A number of important industries are located in this area which is known as Nalnad area.

Malpe—is situated midway between the ports of Goa and Cochin, is the largest fishing centre of the west coast of India. There is a large tract of waste land nearby suitable for establishing naval and shipbuilding yards. A long chain of islands known as Mary's Isles 1½ miles in length running parallel to the coast, can serve as a sea-wall. The port has a natural harbour, free of rocks, sand-drifts and dangerous currents and is protected by nature against storms.

Calcutta Port 1951-52

	Rs.
Deficit ..	2,752,671
Total tonnage	
Imports ..	4,093,068
Exports ..	5,489,914
No. of vessels entered ..	1,460

Madras Port 1951-52

	Rs.
Surplus ..	48·89 *Lakhs*
Total tonnage	
Imports ..	1,854,682
Exports ..	300,138
No. of vessels entered ..	1,091

Bombay Port 1951-52

	Rs.
Surplus ..	183·91 *Lakhs*
Total tonnage	
Imports ..	5,806,000
Exports ..	1,673,000
No. of vessels entered ..	2,764

Cochin Port 1951-52

	Rs.
Surplus ..	16·96 *Lakhs*
Total tonnage	
Imports ..	1,196,007
Exports ..	3,840,840

INDIAN SHIPPING

Position of Indian Shipping—India has about 4,000 miles of coastline extending international trade with the East and the West, a vast population to 'feed' and good prospects of industrialisation. She fully realizes the need of a powerful merchant navy able to compete in speed, carrying capacity and efficiency of service with the best mercantile marines of other nations. The Interim Government of India appointed a Shipping Policy Sub-Committee in 1945 to examine the problem with a view to build up an Indian Mercantile Marine as a part of the post-war reconstruction programme. This committee suggested dynamic shipping policy and recommended *inter alia* (1) the entire coastal trade of India, 50 per cent of her external trade and 30 per cent. of her Eastern trade formerly carried by German, Italian and Japanese vessels should be reserved for Indian shipping; and (2) 75 per cent. of the country's trade with Burma, Ceylon and other neighbouring countries should be carried in Indian bottoms. The Committee also recommended a target of two million tons of mercantile marine for carrying about ten million tons of cargo and about three million passengers.

The Government of India decided in 1947 to assist the Indian shipping companies in achieving targets. Steps were taken to reserve the costal trade of India for Indian ships only and a system of statutory licensing was introduced under the Control of Shipping Act 1947, to give effect to the policy on coastal reservation. Some of the principal steps taken by the government to encourage the development of Indian shipping are detailed below :—

(1) Establishment of an Eastern Shipping Corporation on the State-cum-private ownership basis, 74 p.c. of which will be contributed by the government and the remaining by Scindia. (2) Allotment of government-owned or controlled cargoes to shipping companies engaged in overseas trades. (3) Negotiations with British Shipping interests which have yielded additional opportunities for Indian shipping in the new trades, in the India-Singapore trade and

in the India-U.K.-Continental trades. (4) Sale of Visakakhapatnam-built ships to Indian shipping companies on instalment basis and (5) grant of loans to the shipping companies for the purchase of tonnage under the Planning Commission.

Shipping Control Department—Directorate General of Shipping has been set up in Bombay in 1949. It is the central body of the Government of India controlling the whole problem of shipping in the country. Semi-government shipping corporations, maritime conventions, seamen's welfare, nautical surveys, licences for deep sea navigation and light houses will be among the several maritime subjects which will be dealt with by the organisation. The three principal officers of the Mercantile Marine Department at Bombay, Calcutta and Madras will function under the jurisdiction of the Director-General. The function of the Director-General includes the implementation of the Government's policies with regard to the development of India's merchant navy and the co-ordination of the activities of various ports.

Consultive Committee of Shipowners—with a view to bringing about better liaison between the Government and the shipping industry, an advisory body called Consultive Committee of Shipowners has been constituted.

Categories of India's Maritime Trade—India's maritime trade to-day may be summarised in the following categories.

Pure coastal trade, originating and or terminating at ports on the coast of the Union of India and the *non-coastal trade i.e.*, the balance of the maritime trade with other countries of the world which would be styled as overseas trade. This latter may further be divided into : (1) Indian Ocean Trade ; (2) Atlantic Ocean trade; (3) Atlantic or Pacific Ocean Trade. The first of these may be further divided into Western *i.e.*, comprising South and East Africa, Red Sea and Persian Gulf, and Eastern including Burma, Ceylon, Malaya, China, Japan, Australia.

Country Craft—The importance of country craft in the economics of India's water transport canot be ignored. The sailing vessel, though small in size, carries the bulk of the cargo between neighbouring ports at a relatively cheap cost and plays a vital part in serving as a feeder to industry. The Sailing Vessels Committee appointed in 1948-49 to enquire in the conditions of this industry has submitted recommendations for the rehabilitation of this industry.

Measure to develop Overseas Shipping—The Government of India have been helping Indian shipping companies to become full members of the Shipping Conferences controlling the India-U.K.-Continent, India-North America, India-Australia and India-Malaya trades. In order to facilitate the entry of Indian shipping into all important overseas trades and to assist in solving the difficulty experienced by Indian shipping companies by raising the necessary capital, the Government have announced their scheme for the setting up of Shipping Corporations on a state-cum-private ownership basis. The first Shipping Corporation was registered in March, 1950 with an initial capital of Rs. 20 million. Necessary assistance was also given to Indian shipping companies for acquisition of additional tonnage by furnishing information regarding availabilities and arranging liberal release of foreign exchange. Government are also using their good offices to ensure that Indian companies operating in the overseas trades got their fair share of cargoes.

The Indian shipping companies, namely, Scindia and India Steamship Company apart from Eastern Shipping Corporation are at present operating in the overseas trade with a total of about 176,000 gross registered tons of shipping. Scindia S. N. Co. Bombay and India Steamship Co., Calcutta are operating in India-U.K.-Continent trades and the former also in the India-North America trade. Eastern Shipping Corporation is operating in the India-Australia and India-Malaya trades.

India and the Conference Lines—When after Indian independence, India entered into overseas trade, few people know the struggle which Indian companies had to encounter in order to get their legitimate share in India's trade. A layman would perhaps feel that a shipping company is at liberty to ply its ships wherever it chooses. But in practice, it is not so. There are *Shipping Conferences* for different trades to which Indian shipping companies must be full members before they can participate in the foreign trade. These Conferences are exclusive foreign bodies which would not allow an outsider to come in and have the due share in the trade. But after prolonged struggle the Indian companies have been admitted into Conferences whereby they are enabled to operate on the trade freely with due regard to rules, regulations, restrictions, etc. These Conference Lines cover trade between (1) India and U.K., (2) India and U.S.A. and North Atlantic Ports, (3) India and Australia, (4) Calcutta and the Continent.

Besides these four principal overseas conferences, (1) there is a shipping conference for trades between India and Far East and Japan. An institution which is not a full-fledged conference is called *Rate Agreement*. Rate Agreement exists for the trade between Calcutta and Port Said, Eastern Mediterranean and North African Ports whereby parties to the Agreement agree to quote same rates and follow uniform shipping practices.

Indian Coastal Conference—came into existence in the beginning of 1951 which consists of 13 Indian companies who are full members and two British Companies who are associate members (B. I. S. N. and the Asiatic Steam) without any voting rights for the coastal trade of India.

New Conference—In 1951, the following four Conferences have also come into existence with a view to covering the trades with Burma, Ceylon and Pakistan—(*a*) Pakistan-India-Burma-Ceylon Conference, (*b*) India-Burma Conference, (*c*) Burma-India Conference, (*d*) Burma-Ceylon Conference.

Training Facilities—To train up Indian boys as officers for the Merchant Navy of India, the second line of defence in the navy, facilities are provided by the Indian Merchant Marine Training Ship *Dufferin* in the Bombay Harbour. On the recommendation of the Merchant Navy Officers, Training Committee in 1947-48, the Government established a Nautical and Engineering College in Bombay on October 1, 1948 and also a Marine Engineering College at Calcutta. The Government have also set up a Directorate of Marine Engineering Training to select Engineer apprentices annually and put them through the full training in Marine Engineering. Ratings also receive the training on training ships *Bhadra* at Calcutta and *Mekhala* at Vishakhapatnam. *Bhadra* takes candidates for training from Bengal and adjoining areas while *Mekhala* trains recruits from other areas like Madras, Bombay and Vishakhapatnam. There is recently established a Dockyard Apprentice School inside the Dockyard at Bombay for Marine Engineering, Electrical Engineering, Naval Architecture Training, etc. For the training of Indian boys to marine jobs, West Bengal Government have opened in 1949 a training school under Calcutta Port Commissioners. From the middle of 1950, Government of India have taken over *Lady Fraser* and *Andrews* from Calcutta Port Commissioners, to convert them as training vessels for marine crew of engineering branches.

Ship Building—After the Second World War Scindia Navigation Company Limited began to construct a shipyard in India. This shipyard is situated at Visakhapatnam and is the only one capable of dealing with ocean-going vessels in India. Although the foundation stone was laid in June 1941, the actual shipbuilding was started in 1946, the first ship being launched in March 1948. Though several ships have been launched since then, yet the costs of construction have been quite uneconomical; indeed in order to save the yard from closing down, the Central Governments placed orders for six vessels for construction.

Representations were made by the Scindia Company to the Government of India as early as 1948 for taking over by the Government of the yard. The Government however in 1949 placed order for some ships and undertook to subsidise them on sale to commercial interests to the extent of difference between the actual cost and the cost of a similar vessel constructed in the United Kingdom. In some of the ships subsidy amounted to about Rs. 20 lakhs each. On 21st Jan. 1952, a new private company, the Hindustan Shipyard Ltd. was formed to take over the Scindia yard. The Government as the major (two thirds) share-holder of the Hindustan Shipyard Ltd. will now control the future of the industry but will continue to have the help and experience of the Scindia company who will hold one third interest by contributing Rs. 103·3 lakhs of the total paid up capital of Rs. 309·9 lakhs of the new company. Negotiations for technical assistance of the shipbuilding yard were completed in 1952 with the signing of an agreement between Hindustan Shipyard Ltd. and the Societe Anonyme des Ateliers et Chantiers de La Loire of Paris. Under this agreement (for five years the French firm will provide technical advice in regard to the organisation, development and the management of the shipyard. The A.C.L. has also undertaken to train and guide the Indian Staff. Hindustan Shipyard is to pay to the French firm a sum calculated at four per cent per annum of the turnover of the Company.

Indian Merchant Navy Flag—Ships registered in India have been flying since January 26, 1950, a new merchant navy flag. The flag of a width two-thirds of its length, will be red in colour with the National Flag of India super-imposed in the left-hand quarter.

Five year Plan—This plan envisages an increase in tonnage of about 70 per cent over the level existing at the time the Plan was drawn up. Provision has been made in the Plan for the expenditure of Rs. 19·45 crores over a period of five years of which Rs. 4 crores is to be advanced to shipping companies for coastal trade, Rs. 6·50 crores for overseas trade, Rs. 4·44 crores to the Eastern Shipping Corporation and Rs. 4·51 crores to the Hindustan Shipping Yard at Visakhapatnam.

Progress of the Indian Shipping—Indian Shipping shows steady progress in all directions. Five Year Plan provides for an addition of 215,000 G.R.T. to Indian merchant fleet—105,000 G.R.T. to coastal trade and 110,000 on overseas trade. The policy of reserving the coastal trade for Indian bottoms was fully implemented during the year 1952-53. The needs of the coastal trade were practically met by Indian shipping and the employment of foreign shipping on the coast was reduced to very small proportions. The total tonnage available to Indian Companies for employment on coastal and inland trade was 254,000 tons at the end of 1952 as against 210,000 tons at the end of 1951. The chartered tonnage with Indian shipping companies amounted to 70,000 tons at the end of 1952 as against 15,000 tons at the end of 1951.

FOREIGN TRADE—TONNAGE OF VESSELS ENTERED AND CLEARED WITH CARGOES

(*Monthly averages or Calendar months*)
(In thousand tons)

	Tonnage entered					*Tonnage cleared*				
	Total	*Br.*	*Indian*	*American*	*Other Nationalities*	*Total*	*Br.*	*Indian*	*American*	*Other Nationalities*
1948	646	418	16	64	148	567	364	19	65	119
1949	741	453	21	50	217	559	335	30	49	145
1950	670	391	38	53	188	607	348	50	58	151
1951	777	389	54	108	226	649	336	66	63	184
1952	773	380	56	104	233	739	345	75	72	247

INDIA'S GENERAL ELECTIONS

The first General Election on a basis of adult suffrage ever held in India took place between October 1951 to January 1952. The percentage of voting was remarkably high and the average throughout the country was more than 50 per cent ; in the highly literate State of Travancore-Cochin, it reached as much as 80 per cent. Although nearly three million women automatically disqualified themselves by refusing to give their own, apart from their husbands', name for inclusion in general rolls in many areas, a high proportion of the female electorate did record its vote.

Although the non-congress votes in the country as a whole was larger than the Congress vote, no other party has emerged as a serious rival to Congress. The most significant congress reverses took place in the three southern States, Madras, Travancore-Cochin and Hyderabad where the Communists emerged as the strongest single party after Congress.

PRESIDENTIAL ELECTION

The votes polled by different candidates are as follows—

Dr. Rajendra Prasad ..	5,07,400	Chaudhuri Hariram ..	1,954
Prof. K. T. Shah ..	92,827	K. K. Chatterjee ..	533
L. G. Thatte ..	2,672	Invalid ..	10,527

CONGRESS MAJORITY IN THE STATES

Absolute majority

	No. of Seats	Congress
Assam	108	76
Bihar	330	240
Bombay	315	269
Hyderabad	175	93
Madhya Bharat	99	75
M. P.	232	194
Mysore	99	72
Punjab	126	97
Rajasthan	160	82
Saurashtra	60	55
U. P.	430	390
W. Bengal	238	150

Congress in power—but no overall majority

Madras	375	152
Orissa	140	67
Travancore-Cochin	108	43

Congress not in power

	No. of Seats	Congress
PEPSU	60	26

HOUSE OF THE PEOPLE

	Total	Con.	Soc.	KMP	JS.	CPI	SCF	OP	IND
Assam	12	11	1	—	—	—	—	—	—
Bihar	55	45	3	—	—	—	—	6	1
Bombay	45	40	—	—	—	—	1	7	3
M. P.	29	27	—	—	—	—	—	—	2
Madras	75	35	2	6	—	8	—	9	15
Orissa	20	11	1	—	—	1	—	5	2
Punjab	18	16	—	—	—	—	—	2	—
U. P.	86	81	2	—	—	—	—	1	2
W. Bengal	34	24	—	—	2	5	—	2	1
Hyderabad	25	14	1	—	—	7 (PDF)	1	1	1
M. Bharat	11	9	—	—	—	—	—	2	—
Mysore	11	10	—	1	—	—	—	—	—
Pepsu	5	2	—	—	—	—	—	2	1

Rajasthan	20	9	—	—	1	—	—	4	6
Saurashtra	6	6	—	—	—	—	—	—	—
Tr.-Cochin	12	5	—	—	—	—	—	2	5
Ajmir	2	2	—	—	—	—	—	—	—
Bhopal	2	2	—	—	—	—	—	—	—
Bilaspur	1	—	—	—	—	—	—	—	1
Coorg	1	1	—	—	—	—	—	—	—
Delhi	4	3	—	1	—	—	—	—	—
H. Pradesh	3	2	—	—	—	—	—	—	1
V. Pradesh	6	4	1	1	—	—	—	—	—
Kutch	2	2	—	—	—	—	—	—	—
Manipur	2	1	1	—	—	—	—	—	—
Tripura	2	—	—	—	—	2	—	—	—
	489	362	12	9	3	23	2	37	41

Parties :—Con.=Congress ; Soc.=Socialist ; K.M.P.=Kishan Majdur Party ; J.S.=Jan Sang ; C.P.I.=Communist Party of India ; S.C.F.=Scheduled Castes Federation ; O.P.=Other Parties ; I.N.D.= Independents

Other Parties :—(1) Bihar—Jharkand 3, Lok Sevak Sangh 2, Chotanagpur, S.P. Janata Party 1=6. (2) Bombay—Peasants & Workers Party 1. (3) Madras—Tamilnad Toilers Party 4, Commonweal Party 3. Moslem League 1, Forward Bloc (Marxist) 1=9. (4) Orissa—Ganatartra Parishad, 5, (5) Punjab—Akali Party 2, (6) U.P.—Hindu Mahasabha 1, (7) West Bengal—Hindu Mahasbha 1, Revolutionary Socialist Party 1=2, (8) Hyderabad—Peasants & Workers Party 1. (9) Madhya Bharat—Hindu Mahasabha 2. (10) Pepsu—Akali Party 2. (11) Rajasthan—Ram Rajya Parishad 3. Krishak Lok Party 1=4. (12) Travancore-Cochin—Travancore Tamilnad Congress 1, Revolutionary Party 1=2.

Composition of the House of the People

	Valid votes polled	*p.c. to total valid votes*	*Seats won*
Congress	47,528,011	44·85	362
Socialist	11,126,344	10·50	12
K.M.P.P.	6,158,782	5·81	9
C.P.I. & P.D.F.	4,712,009	4·45	23
Jan Sangh	3,236,361	3·05	3
S.C.F.	2,501,964	2·30	2
Ram Rajya	2,094,811	1·98	3
Krishekar Lok	1,489,488	1·40	1
Hindu Mahasabha	1,046,263	0·91	4
Forward Bloc (M)	988,272	0·90	1
R.S.P.I.	393,984	0·37	2
Forward Bloc (R)	133,936	0·13	—
R.C.P.I.	26,245	0·02	—
Bolshevik Party	25,792	0·02	—
O. Parties	7,678,662	7·27	26
Independents	16,845,494	15·90	41
	105,987,318	99·86	489

P. C. of Voters who Voted in the House of the People

Assam	49·18	Hyderabad	42·84	Bhopal	40·35
Bihar	41·03	M. P.	36·16	Coorg	67·46
Bombay	56·35	Mysore	53·14	Delhi	57·72
M. P.	47·11	Pepsu	59·20	H. Pradesh	26·26
Madras	56·50	Rajasthan	41·06	V. Pradesh	30·23
Orissa	34·05	Saurashtra	42·20	Kutch	41·46
Punjab	56·05	Tr.-Cochin	70·80	Manipur	50·75
U. P.	38·98	Ajmir	54·27	Tripura	48·41
W. Bengal	44·78				

COUNCIL OF STATES

Council of States consists of 216 members of which 12 are nominated by the President and the remaining 204 are representatives of the States. The strength of the different political parties in the Council of States is as follows—

Congress ..	146
Praja Socialists ..	10
C. P. I. ..	9
People's Democratic Front	2
United Front of Leftists ..	2
S. C. F. ..	2
Sanyukta Dal (Rajasthan)	2
Ganatantra Parisad (Orissa) ..	2
Workers & Peasants Party	2
Krishikar Lok Party ..	1
Jan Sangh ..	1
Hindu Mahasabha ..	1
Forward Bloc (Marxist)	1
Independents & Others ..	19
	200

Remaining 16 members who are nominated by the President include four from State of Jammu and Kashmir.

STATE ASSEMBLIES & ELECTORAL COLLEGES

	Total	Con.	Soc.	KMP.	JS.	HMS.	CPI.	SCF.	OP.	Ind
Assam	108	76	4	1	—	—	1	—	9	14
Bihar	330	240	23	1	—	—	—	—	53	13
Bombay	315	269	9	—	—	—	—	1	18	18
M. P.	232	194	2	8	—	—	—	—	5	23
Madras	375	152	13	35	—	—	62	2	49	62
Orissa	140	67	10	—	—	—	7	—	35	21
Punjab	126	97	1	—	—	—	4	—	20	4
U. P.	430	390	18	1	2	1	—	—	3	14
W. Bengal	238	150	—	15	9	4	28	—	16	16
Hyderabad	175	93	11	—	—	—	42*	5	10	14
M. Bharat	99	74	4	—	4	12	—	—	2	3
Mysore	99	74	3	8	—	—	1	2	—	11
Pepsu	60	26	—	1	2	—	2	1	20	8
Rajasthan	160	82	1	1	8	2	—	—	31	35
Saurashtra	60	55	2	—	—	—	—	—	1	2
Tr.-Cochin	108	43	11	—	—	—	—	—	16	38
Ajmer	30	20	—	—	3	—	—	—	3	4
Bhopal	30	25	—	—	—	1	—	—	—	4
Coorg	24	15	—	—	—	—	—	—	—	9

Delhi	48	39	2	—	3	1	—	—	—	3
H. Pradesh	36	24	—	3	—	—	—	1	—	8
V. Pradesh	60	41	10	3	2	—	—	—	2	2
Kutch	30	28	—	—	—	—	—	—	—	2
Manipur	30	10	1	—	—	—	2	—	16	1
Tripura	30	9	—	—	—	—	12	—	3	6
	3373	2293	125	77	33	21	161	12	312	335

*P.D.F. Results of 3 seats of Assam and 1 seat of West Bengal not included.

Seats Polled by the Parties in State Assemblies

	Valid votes polled	*p.c. to Valid votes*	*Seats won*
Congress ..	43,950,265	42·34	2,247
Socialist ..	10,072,316	9·70	125
Communist & P.D.F.	5,463,338	5·25	147
K. M. P. P. ..	5,291,777	5·10	77
Jan Sangh ..	2,917,830	2·81	33
S. C. F. ..	1,808,742	1·74	12
Ramrajya Parishad ..	1,261,135	1·21	32
Krishikar Lok & Khedut Lok Pash (Bom.) ..	1,126,288	1·08	23
Hindu Mahasabha ..	858,899	0·83	20
Forward Bloc (Marxists)	853,810	0·82	18
R. S. P. I. ..	249,114	0·24	6
Forward Bloc (Ruiker)	181,664	0·18	2
R. C. P. I. ..	33,522	0·03	—
Bolshevik Party ..	27,731	0·02	—
Other Parties ..	7,730,131	7·45	212
Independents ..	21,974,210	21·17	326
	103,800,772	99·97	3,280

Elections to three seats in Assam did not take place

Electoral Colleges

Congress ..	146,831	38·32	47
C. P. I. ..	60,631	15·83	14
Socialist ..	13,658	3·56	1
Forward Bloc (R) ..	2,775	0·72	—
Other Parties ..	85,506	22·31	19
Independents ..	73,727	19·25	9
	383,128	99·99	90

"Other Parties" (OP) in the State Assemblies—

Assam—Mizo Union 3, Garo National Council 3, All Peoples Party 1,

Khasi Jaintia Durbar 1, Khasi Jaintia National Federated States Conference 1=9.
Bihar—Jharkand Party 32, Chota Nagpur & S. P. Jànata Party 11, Lok Sevak Sangh 7, Ram Rajya Parisad 1, Ganatantra Parisad 1, Forward Bloc (Marxist)=53.
Bombay—Peasants & Workers Party 14, Kisan Kamgar Paksh 3, Khedut Sangh Lok Paksh 1=18.
M.P.—Ram Rajya Parisad 3, Shetkari Kamgar Paksh 2=5.
Madras—Tamil Nad Toilers Party 19, Krishikar Lok Party 15, Commonweal Party 6, Madras Muslim League 5, Forward Bloc (Marxists) 3, Justice Party 1=49.
Orissa—Ganatantra Parisad 31, Ind. Peoples' Party 3, Forward Bloc (Marxist) 1=35.
Punjab—Akali Party 14, Forward Bloc (Marxist) 2, Lal Communist 2, Zamindara League 2=20.
U. P.—U. P. Praja Party 2, U. P. R. S. P. 1=3.
West Bengal—Forward Bloc (Marxist) 11, Forward Bloc (Ruikar) 2, Gorkha League 3=16.
Hyderabad—Peasants & Workers Party 10.
M. B.—Ram Rajya Parisad 2.
PEPSU—Akali Party 19, Lal Communist 1=20.
Rajasthan—Ram Rajya Parishad 24, Krishikar Lok Party 7=31.
Saurashtra—Khedut Sangh 1.
Tra.-Cochin—Tamilnad Congress 8, R. S. P. 6, Kerala Socialist Party 1, Cochin Party 1=16.
Ajmer—Pursharthi Panchayat 3.
V. Pradesh—Ram Rajya Parisad 2.
Manipur—Praja Sinthi Party 3, All Manipur National Union 3, Achumba Pamba Congress 2, Kuki National Asso. 2, Gandhi Sevak Sabha 1, Zelingrong Union 2, Mao Mariam Union 2, Mizo Union 1=16.
Tripura—Ganatantrik Sangha 3.

P.C. of Voters voted in the State Assembly & Electoral Colleges Elections

	p.c. of votes		*p.c. of votes*		*p.c. of votes*
Assam	50·24	Hyderabad	43·16	Bhopal	37·31
Bihar	40·91	M. P.	35·73	Coorg	65·87
Bombay	57·02	Mysore	52·89	Delhi	58·95
M. P.	46·03	PEPSU	59·43	H. Pradesh	26·68
Madras	56·57	Rajasthan	40·77	V. Pradesh	29·61
Orissa	34·56	Saurashtra	48·28	Kutch	40·02
Punjab	55·87	Tra-Cochin	69·37	Manipur	46·67
U. P.	39·33	Ajmer	52·24	Tripura	39·49
West Bengal	43·48				

DELIMITATION COMMISSION

The number of seats to be allotted to each State in the House of the People and the number of seats to be reserved therein for the Scheduled Castes and the Schedules Tribes of the States has been revised as published in the Gazettee of India Extraordinary 17th July 1953.

House of the People

Part A States

	Total No. of Seats	*Sch. Castes*	*Sch. Tribes*
Andhra	28	4	1
Assam	12	1	2
Bihar	55	7	6
Bombay	49	4	5
M. P.	29	4	3
Madras	49	8	0
Orissa	20	4	4
Punjab	17	3	0
U. P.	86	16	0
W. Bengal	34	6	2

Part B States

	Total No. of Seats	*Sch. Castes*	*Sch. Tribes*
Hyderabad	25	*	0
Jammu & Kashmir	6	0	0
M. Bharat	11	2	1
Mysore	13	2	0
Pepsu	5	1	0
Rajasthan	21	2	0
Saurashtra	6	*	0
Tr.-Cochin	13	1	0

Part C States

	Total No. of Seats	*Sch. Castes*	*Sch. Tribes*
Ajmer	1	0	0
Bhopal	2	0	0
Bilaspur	1	0	0
Coorg	1	0	0
Delhi	3	0	0
H. Pradesh	2	0	0
Kutch	2	0	0
Manipur	2	0	1
Tripura	2	0	1
V. Pradesh	5	1	1

* No of seats to be reserved in the House of the People for Scheduled Castes of Hyderabad and Saurashtra will be determined by subsequent Order.

Legislative Assemblies

Part A States

	Total No. of Seats	*Sch. Castes*	*Sch. Tribes*
Andhra	196	26	5
*Assam	108	5	9
Bihar	330	41	33
Bombay	294	25	27
M. P.	232	32	27
Madras	245	39	1
Orissa	140	25	28
Punjab	119	22	0
U. P.	430	78	0
W. Bengal	238	45	11

Part B States

	Total no. of Seats	*Sch. Castes*	*Sch. Tribes*
Hyderabad	175	†	3
M. Bharat	99	16	13
Mysore	117	21	0
Pepsu	60	12	0
Rajasthan	168	18	3
Saurashtra	60	†	1
Tr.-Cochin	117	11	0

* Out 108 seats assigned to the Legislative Assembly of Assam, 18 Seats shall be reserved for the autonomous districts of Assam.

†Number of Seats to be reserved in the Legislative Assembles of Hyderabad and Saurashtra for Sch. Castes will be determined by subsequent Order.

INDIAN EDUCATION

THE PRESENT SET-UP—Education is a State subject, but Union Government is responsible for the administration of institutions of national importance for scientific or technical education, financed wholly or in part by it. The Indian Government is also responsible for the adminitration of four Central Universities, namely, *Banaras*, *Aligarh University*, *Delhi University* and the *Visva Bharati*.

In addition the Union Government deals with central agencies and institutions for (*a*) professional, vocational or technical training including the training of police officers (*b*) promotion of special studies or research (*c*) scientific or technical assistance in the investigation or detection of crime.

The Government of India is directly responsible for education in the Part C States and Part D territories. The Ministry of Education at the Centre consists of an Educational Adviser-cum-Secretary, a Joint Educational Adviser and ex-officio Joint Secretary, a Joint Educational Adviser and four Deputy Educational Advisers who are in charge of the different Divisions in the Ministry. There are also two Deputy Educational Advisers who are in charge of educational work in London and Washington.

The tast of bringing education to the masses in the immediate responsibility of the States. In the States, the "Education" is in charge of a minister. The Secretary of the Department of Education is the permanent head of the Department and the Director of Public Instructions acts as an expert adviser to the Minister of Education. The Director controls the inspecting staff and the teaching staff of the governmental institutions. In some Centrally Administered Areas, there are Directors of Education.

EDUCATIONAL SYSTEM IN INDIA—At the lowest level of our educational system are *Nursery Schools* for children of age-group 3—6. Then come the *Primary or Elementary Schools* for children of age-group 6—11. These schools are called *Junior Basic Schools*. The *Secondary Schools* which follow next are of two categories—the *middle* or the *Senior Basic Schools* and the *High Schools*. These carter to the needs of children of roughly the age-groups 11—14 and 11—16 respectively. In some States, the Secondary Schools are called Higher Secondary Schools and carter to the needs of children of roughly the age-group 11—17. In general education next to High Schools are the *Intermediate Colleges* or the Intermediate Classes of Degree Colleges. These generally cover the age-group 16—18. After passing the Intermediate, the students enter Degree Colleges or the Universities and the age-group covered here is roughly 18—24.

In professional education, the Polytechnics or Vocational and Technical Schools are of a mixed type in the sense that the diplomas and certificates awarded together are of both an undergraduate and higher standard. The professional and Technical Colleges are at par in standard with other Colleges and award University degrees.

Junior Basic Education—The Central Advisory Board of Education has recommended that at least eight years of basic education must be provided for each children. The Government of India have accepted this recommendation and have advised the State Governments to make adequate provision, as early as possible, for the compulsory and free basic education of all children between the ages of 6 to 11. The basic system of education is based on the principle of "learning through activity." It has a bias towards basic crafts, such as agriculture, spinning and weaving, fruit and vegetable gardening, carpentary, leather work, book-craft, domestic crafts including cooking, sewing, house management etc. In fact these basic crafts would constitute the basis of education in the new schools. In the course of few years, all the primary schools will be replaced by junior basic schools.

Secondry Education—can be said to consist of two well-defined stages (1) middle stage and (2) high school stage. This middle stage or senior basic education is complementary to junior basic education. The instruction in the senior basic schools would have a bias towards the crafts. High School Stage is known in different names in different states. The students who pass the higher secondary stage are admitted to degree classes of the universities, where the duration of instruction for a pass degree is three years. In all other cases students have to spend another two years in the intermediate classes.

So the present educational structure in India may be summarised as follows—(1) Primary Schools which impart instruction through the regional language or the mother tongue of the child (2) middle schools which impart instruction through the regional language and English or only through the regional language, (3) secondary schools which provide instruction up to the matriculation or an equivalent standard. (4) intermediate colleges affiliated to boards or universities, (5) degree colleges affiliated to the universities and (6) post-graduate and research institutions.

Technical education—A separate division of the Ministry of Education is in charge of technical education. The Union Government have set up All India Council for Technical Education to advise them on the development, coordination and standardization of technical education. As a result of the decision of All India Council for Technical Education to set up four regional committees for liaison work between educational institutions on the one hand and industry and technical departments of the Government on the other, the Government of India have decided to set up four regional offices of Union Ministry of Education, each headed by an assistant educational adviser. In 1945 a committee was appointed known as Sarkar Committee for the development of higher technical education in India. The committee recommended no less than four higher technical institutions in the north, east, south and west were needed to meet the country's requirements. A higher technical institution for eastern India has already been started at Kharagpur, near Calcutta.

University education—After passing the matriculation and intermediate examinations, students are admitted to degree courses in the arts, science, commerce, agriculture, engineering, medicine etc. The degree awarded as those of B.A., B.Sc., B.Com., B.Ag., B.E., M.E., B.S. The post-graduate degrees are M.A., M.Sc., M.Com., M.E., M.D., M.Ed., LL.D and L.L.m., and the higher research degrees are Ph.D., D.Sc., D.Litt., LL.D. etc.

Adult education—There are various types of adult education centres in the country which provide both short term and comprehensive courses. The shorter courses are mostly confined to the promotion of literacy, but in a few states these are courses of longer duration for health, sanitary and civics. Education through audio-visual side is an important aspect of social education in the country; mobile vans are equipped with projectors and films, gramophones and magic lanterns. Facilities for education and training in the visual arts and crafts, agriculture, music, dancing are being provided in schools and colleges. Facilities for this class of training are given in some universities such as Bishwa Bharati.

Education of the Handicapped—Schools for the handicapped can be classified as: (1) schools for the physically handicapped (blind, deaf and dumb) and (2) schools for the mentally handicapped.

There are 50 institutions for the blind and 42 for deaf and dumb. For the mentally handicapped there are only two institutions —one in West Bengal and other in Bombay. Training Centre for adult blind has been established at Dehra Dun in 1950. The Central Braille Printing Press at Dehra Dun is now producing Braile book in Hindi.

OPENING OF UNIVERSITIES IN INDIA—The first three Universities of Calcutta, Bombay and Madras were established during the year 1857; and for 30 years no addition was made until, in 1887 was organised the Allahabad University. A period of about 29 years again elapsed before a set of two more Universities, namely, Banaras and Mysore were founded. This however, was the beginning of a series of Universities opened on an average, one every year till 1929 Patna 1917, Osmania 1918, Aligarh 1920, Lucknow 1921, Delhi 1922, Nagpur 1923; Andhra 1926, Agra 1927, and Annamalai 1929. After this the pace was retarded and we had an addition of two universities (Travancore and Utkal) at periods of 8 and 14 years respectively. Three years later in 1946 was founded the University of Saugor. This again was the beginning of a long series of new universities founded at the rate of several in one year. Punjab and Rajputana 1947; Poona, Roorkee, Jammu-Kashmir and Gauhati 1948. S. N. D. T. J. Women's and Baroda 1949; and Karnatak and Gujerat 1950. Biswavarati become a chartered university in 1951 and Maharashtra University is the last one started in 1952.

SARGENT SCHEME—In 1944 Central Board of Education drew up a national scheme of education, generally known as the *Sargent Scheme*. This scheme envisaged the establishment of elementary schools and high schools (junior or senior basic schools). It covered a six year course for children between the ages of 11 and 17. The high school were to be two types. *Academic* and *Technical or Vocational* schools with different curricula. The scheme recommended the abolition of the intermediate course and the addition of an extra year each at high school and college. This plan, in the main, has been accepted by the Government of India. The Sargent Scheme envisaged a 40 year educational reconstruction plan for the whole country. It was later reduced to 16 years by the Kher Committee.

EDUCATIONAL BOARDS & COMMITTEES

Central Advisory Board of Education—which was abolished in 1923 as a measure of economy was revived by the Government of India in August, 1935. It consists of all State Ministers of Education or their Directors of Public Instruction, Representatives of the Inter-University Board, Indian Parliament nominees of the Government of India. Its main functions are to serve as a clearing house of idea and to act as a distributing centre of educational information for India.

Bureau of Education—There is also the Central *Bureau of Education* established in 1915 under the control of the Educational Commissioner with the Government of India. Its main duty is to collect and collate information about education in India and abroad and to arrange for publication of educational reports etc.

University Education Commission—A commission with Dr. S. Radhakrishnan as chairman was appointed by the Government of India in 1948 to report on the University Education and suggest improvements. Some of the important recommendation of the commission are as follows—

Scales of pay for university teachers should be raised. Students should be admitted only after they had completed 12 years of pre-university education. Working days at the university should not be less than 180 in the year exclusive of examinations. The higher education should have three main objectives, those of a general education, a liberal education and occupational education. The first of these has to be specially emphasized, as its importance has not so far been adequately recognised. More attention should be paid to subjects such as (1) agriculture (2) commerce (3) education (4) engineering and technology (5) law and (6) commerce. The existing engineering and technological institutions should be looked upon as national assets and steps taken to improve them. A university degree should not be considered essential for the administrative services. Special state examinations for recruitment to the various government services should be open to all candidates. As far as possible examinations should be held subjectwise at different stages. The examination standard should also be raised and made uniform in all universities and university education placed on Concurrent List. There must not be no attempt at hasty replacement of English as a medium of instruction for academic standards. As for examination the Commission recommended the *objective test* which was in vogue in America. The recommendations of the Commission were generally approved by the Central Advisory Board of Education. Necessary legislation has been undertaken to implement its recommendations.

Scientific Manpower Committee—Scientific Manpower Committee appointed by the Government of India in 1947 to assess the country's requirements for scientific and technical manpower for various purposes as well as for suggesting suitable measures for meeting the requirements submitted its reports in July, 1949. The Committee found that the overall requirements of the country in respect of scientific and technical manpower during the next five-year-period are of the order of 54,000 engineers and 20,000 technologists and that available resources of training are hardly sufficient even to meet 50% of the requirements.

Inter-university Board—The need of co-operation in the work of Universities in India was expressed by the Calcutta University Commission. The Indian Universities Conference held at Simla in 1924, pased a resolution unanimously recommending to the Universities that it was desirable that an Inter-University organisation should be established for (1) Bureau of Information, (2) Exchange of Professors, (3) Co-ordination of university work, (4) Obtaining recognition for their degrees, diplomas and examinations in other Universities, (5) serving as appointments bureau for Indian Universities etc.

Advisory Board of Physical Education—The Government of India have established an *Advisory Board of Physical Education and Recreation* to draw up a plan of Physical Education for schools and colleges. For the present the Board considered it advisable to concentrate, for the time being, on athletic camps. For this purpose the country is divided into five zones, each zone to have a three-week camp. The object of this is to raise the standard of athletics in schools and colleges and to strengthen the sense of unity in the minds of the youth who would come from different parts of the country and line together.

Education of the Handicapped—A common Braille Code for Indian languages, known as *Bharati Braille* has been finalisal in confomity with International Braille. With the effect from 1st January, 1950 the Government have established a Training Centre for adult blinds in Dehra Dun. Home and School for the Blind at Ajmer has been taken over from private management and is being developed with a model institution for the Hindi-speaking Centrally administered areas.

There are 42 institutions for the blind in different parts of the country, most of which are aided by the State Governments. There are about 33 institutions for the deaf and dumb in the country. There are only two institutions, one in Bombay and the other in West Bengal for mentally handicapped children. There is only one institution in Bombay which provides facilities for the treatment and teaching of the crippled.

SOCIAL EDUCATION—The social education arises at providing not only literary but training for a fuller and more abundant life for the masses who have had to face handicaps and deprivations for many decades. The scheme of social education was introduced in 1952. Successful literary drives are undertaken and educational melas are held to arouse interest in education among the people and to give them education through audio-visual means. *Janata College* has been opened at Alipur near Delhi in order to train selected villagers for local leadership. Educational campaigns have been conducted in the villages through the 'caravans' also. New methods and equipment have been used to educate the masses. For instance, *audio-visual aids* are being supplied free by the Government. Radio sets, cinema vans, and films are being utilised in connection with social education. The film library of the Central Ministry of Education has at present a stock of over 1500 16 m.m. film strips which are lent to institutions free of charge. About 440 institutions all over India now reserve the benefit of this service. In Oct. 1951 an all-India conference of audio-visual education was organised by the Ministry of Education. The Government of India has opened a training centre for blind adults at Dehra Dun for under-going training at State expense. India has played an important part in devising a single braille and script for the world blind population. Printing machinery needed for Central Braille Printing Press has been received from abroad.

MEDIUM OF INSTRUCTION AND FEDERAL LANGUAGE—The question of medium of instruction in educational institutions especially in schools has always been a controversial point. After the achievement of independence, the State Governments tried to replace English by an Indian language. In a sub-continent like India not only are there many languages but people speaking different languages have settled in the same State. Consequently, in inumerable cases, children with different mother tongues go to the same school. This has made the question of medium of instruction very complicated. The Government of India, therefore, called a Conference of State education ministers to arrive at a tangible decision on this knotty point.

The Conference was held in August, 1949. It was unanimously agreed that the medium of instruction and examination in the Junior Basic (Primary) stage must be the mother tongue of the child and where the mother tongue was different from the regional or State language, arrangements should be made to impart instruction in the mother tongue provided there were not less than 40 pupils speaking the same language in the whole school or 10 such pupils in a class. The regional or State language should however, be introduced not earlier than Class III and not later than the end of the Junior Basic stage.

The conference also decided that in the Secondary stage, if the number of pupils whose mother tongue was a language other than the regional or State language was sufficient to justify a separate school in an area, the medium of instruction of such a school should be the mother tongue of the pupil. If such schools were organised by private societies they should be entitled to recognition and grants-in-aid from the State Governments. The Government also should provide similar facilities in all Governments, Municipal and District Board schools where one-third of the total number of pupils of a school requested for instruction in their mother tongue. The regional language should be compulsory throughout the Secondary stage.

As regards the medium of instruction at the university stage, the University Education Commission have recommended that English which is at present the medium in most universities should be replaced as early as practicable by an Indian language. This recommendation of the Commission has been approved by the Government of India.

The Constitution of India has laid down that Hindi in Devnagri script should be the Federal language of the Union and should be developed so that it may become a medium of expression for all the elements of the composite culture of India. For this purpose the Government of India have sent a letter to all the State Governments requesting them to make Hindi a compulsory subject in the secondary schools. The University Education Commissoin have also recommended that students at the university stage should be conversant with the Federal Language.

ACTIVITIES OF THE EDUCATION MINISTRY

(1) *Overseas Scholarships*—The Overseas Scholarship Scheme was started in 1945. The main object of these scholarship is to send students abroad for training in subjects for which facilities are not available in India and also to improve the standard of instruction and research in the country. Scholarships are awarded to Indian students. Scholars are exchanged with foreign universities and scholarships are granted to foreign scholars on a reciprocal basis. Cultural scholarships are also awarded to promote better relations between India and foreign countries.

(2) *Scholarship for scheduled castes and backward tribes* was instituted in 1944-45. Its scope has been widened to include students of Scheduled Castes, Scheduled Tribes and other backward classes.

(3) *Cultural Scholarship*—In order to encourage cultural relations and foster better understanding between India and other countries, the Government of India award number of scholarships every year. The scholarships are awarded for studies in arts and humanities, sciences, agriculture, medidine, technology, education, law, commerce, forestry, veterinary science and civil engineering.

(4) *Cultural Activities*—In order to promote cultural relations with foreign countries grants-in-aid to cultural organisations in the Middle East countries, to the India League, Australia and Italo Indian Association and other associations are provided. Books are presented to universities and institutions abroad.

(5) *Indian National Commission for the co-operation with UNESCO*—to maintain liasion between UNESCO and various institutions working for the progress of education, science and culture, has been established. This Commission will also serve the Government of India in an advisory capacity in matters relating to UNESCO. Government of India have started a pilot library project in cooperation with UNESCO. The literatures received from UNESCO are widely distributed.

(6) *Publications*—some useful and interesting publications have been brought out by the Education Ministry, such as *Archaeology in India, Facilities for advanced studies abroad, etc. History of Philosophy* (*Eastern and Western*) was completed. It is proposed to publish a history of the struggle for freedom in India. The Government of India have appointed a committee for the collection from all possible sources necessary material for the preparation of a history of the Freedom Movement in India.

(7) *Overseas Information Bureau* has been started with three sections, namely information service, publications and library.

(8) *National Archieves* for the preservation of interesting and rare manuscripts by acquisition of records, by microfilming copies of manuscripts of Indian interest from foreign countries.

(9) *All-India Council of Technical Education.*

(10) *Archaeology*—the Archæological Department looks after the conservation of ancient monuments in India. By an Act of Parliament, certain important ancient and historical movements and archæological sites and remains in Part A and Part B States have been brought under Central Archæological Department.

(11) *Indian Council of Cultural Relations*—though a non-official body, it has active support of the Government. It devotes to the strengthening of India's cultural contracts with other Asian countries. The Council will be divided into two sections, one connected with countries of the Middle East and Turkey and other with countries of the Far East, China and Japan.

(12) *Training Institutions*—Following are the training institutions under the Education Ministry—*Central Institute of Education* and *Lady Irwin College.*

(13) *Social Welfare Fellowship*—under the programme of the Social Activities Division of the United Nations' Organisation, fellowships are awarded to Indian candidates to observe social walfare work overseas.

(14) *National Museum of Art, Archaeology and Anthropology* has been started in the Government House, Delhi.

(15) *Department of Anthropology* is another important branch of activity of the Education Department.

(16) For the study and research of the Indian music, the Ministry of Education with the help of the State Government have set up *National Academy of Hindustani Music* at Lucknow. This undertakes instructions in the northern style of Indian music and also encourages research and new developments. In co-operation with the Government of Madras, the Ministry has also organised the *Central College of Karnatak Music.* This will be widely representative of all interests in Karnataka music.

(17) *National Art Treasures Fund* was finalised in 1951 with the object of purchasing and securing art treasures of India from India and abroad.

(18) In the realm of art and culture, the *Sangit Natak Akadami* (National Academy of Dance, Drama and Music) has been established in 1953.

(19) *An Advisory Board of Social Welfare* was set up to sanc-

tion grants-in-aid to institutions and associations for social welfare, to nominate representatives on national bodies for social welfare and to serve as liaison between the Government of India and local governments on the one hand and non-official bodies on the other. The Board coordinates social welfare reform initiated bv various ministries, State Government and non-official bodies.

(20) *Indian National Commission* has been set up in 1949. This Commission consists of 78 members representing various voluntary associations, state governments etc. Its main programme of work is as follows—(1) To lay down the principles to be followed for preparation of text books so that they promote national solidarity, international understanding and world fellowship (2) to prepare a list of books in Indian languages suitable for translation into foreign languages, (3) to prepare a current list of all translations of books in foreign languages in the field of education, science and culture, (4) to select a list of representative literary works best suited to provide understanding of Indian culture. The National Commission will have three sub-commissions, one each for education, science and culture.

(21) On the approval of the Central Advisory Board of Education regarding scientific terminology, a *Board of Scientific Terminology* comprising philologists and scientists were appointed and the Board decided that in all Hindi and other text books written in the Indian languages, international technical terms should be used except where suitable terms were available in the Indian languages. As regards symbols, signs and formulæ used in mathematics and other sciences, it was decided that they should be adopted without modification.

(22) *Central Hindi Organisation*—has been sent up under the Ministry of Education for the development and propagation of Hindi so that English might be replaced within the stipulated period of 15 years as provided in the Constitution.

(23) *Grants for research*—financial grants are given to a number of institutions to encourage research dealing with education and culture—such as Inter-University Board, Inter-State Board of Anglo-Indian Education, Bhandarkar Oriental Research Institute at Poona, Asiatic Society of Bengal, etc.

(24) In connection with the establishment of the *National Cultural Trust*, a scheme of five arts scholarships of the value of Rs. 3,500 each for the survey of any research in selected local arts has been initiated in co-operation with State Governments.

(25) Decision of the Government of India to establish a *National Academy of Letters* to be known as *Sahitya Akadami* was announced in 1952 to work actively for the development of Indian letters and to set high literary standards to foster and co-ordinate literary activities in all Indian languages and to promote through them all the cultural unity of the country.

(26) *University Grants Commisslon* was established in 1953 to advise on the allocation of grants-in-aid from public funds to the central or other universities and institutions of higher learning.

(27) *National Art Gallery* is being set-up at Jaipore House in New Delhi.

MUSEUMS IN INDIA

Indian Museum, Calcutta.
Govt. Industrial Museum, Cal.
Victoria Memorial Hall, Calcutta.
Commercial Museum, Calcutta.
Royal Asiatic Society, Calcutta.
Bangiya Sahitya Parisad, Cal.
Ashutosh Museum, (Cal. Univ.).
Natural History Museum, Darjeeling.
Malda Museum, Malda.
Patna Museum, Patna.
State Museum, Lucknow.
Archæological Museum, Sarnath.
Curzon Museum, Mathura.
Archæological Museum, Jaipur.
State Museum, Udaipur.
State Museum, Baroda.
Rajasthan Museum, Ajmer.
State Museum, Hyderabad.
Prince of Wales Museum, Bom.
Natural History Museum, Bom.
Central Museum, Nagpur.
Govt. Museum, Madras.
Mysore Govt. Museum, Bangalore.
Archæological Museum, Gwalior.
State Museum, Bikaner.
National Archives of India, New Delhi.
Fort St. George Museum, Madras.
Indore Museum, Indore.
Sardar Museum, Jodhpur.
Jardine Museum, Khajuraho.
Puddukottai Museum, Puddukottai.
State Museum, Trichur Cochin.
Junagadh Museum, Junagadh.
Nawanagar Museum, Nawanagar.
Victoria Jubilee Museum, Bezwada.
Archæological Museum, Bijapur.
Rajkot Museum, Rajkot.
Trichur Museum, Trichur.
Archæological Museum, Nagarjunikonda.
Taj Museum, Agra.
State Museum, Bhuvaneswar.
Museum of Archæology, Sanchi.
Central Asian Antiquities Museum, New Delhi.
Red Fort Museum, Delhi.
National Museum, New Delhi.
Archæological Museum, Nalanda.
Trivandrum Museum, Trivandrum.
Khiching Museum, Mayurbhanj.
State Museum, Gauhati.
Municipal Museum, Allahabad.
Bhuri Singh Museum, Chamba.
Faizabad Museum, Faizabad.
Bharat Kala Bhawan, Banaras.
Sri Pratap Singh Museum, Srinagar.
Watson Museum, Rajkot.
Barton Museum, Bhavnagar.
Sir Salarjang Museum, Hyderabad.

VICE-CHANCELLORS OF UNIVERSITIES

Name	*Vice-Chancellors*
Calcutta (1857)	Mr. S. N. Banerjee.
Bombay (1857)	Mr. N. J. Wadia.
Madras (1852)	Dr. A. Lakshmanaswami Mudaliar.
Allahabad (1886)	Dr. D. R. Bhattacharjee.
Lucknow (1920)	Acharya Jugal Kishore.
Nagpur (1923)	Lt-Col. Pt. Kunjilal Dubey.
Patna (1927)	Dr. Basudev Narayan.
Bihar University (1952)	Sri Shayamnandan Sahay.
Aligarh Muslim (1920)	Dr. Taher Safiuddin.

Delhi (1922)	Dr. G. S. Mahajani.
Agra (1927)	C. V. Mahajan.
Banaras Hindu (1915)	Acharya Narendra Deo.
Andhra (1926)	Dr. V. S. Krishna.
Annamalai, Chidambaram (1929)	Dr. C. P. Ramaswami Iyer.
Mysore (1916)	Dr. B. L. Manjunath.
Osmania, Hyderabad (1918)	Dr. S. Bhagawantam.
Travancore (1938)	Sir Ramaswami Mudaliar.
Utkal University (1943)	Dr. Parasuram Mishra.
Kashmir Univ. (1949)	
Saugor M.P. (1946)	Dr. Ram Prasad Tripathi.
Jamia Millia Islamia (Muslim National Univ.), Delhi, (1921)	M. Mujeed.
Rajputana Univ. Jaipur (1947)	
Ind. Women's University (1902) Poona	Mrs. Sarada Mehta.
University of Gauhati (1948)	Sri K. K. Handique.
Bisvabharati (1921)	Kshiti Mohan Sen.
Madhya Bharat University (Indore) 1948	Dewan Anand Kumar.
Punjab University, Simla (1947)	G. C. Chatterjee.
Karnatak University (1948)	Rai Bahadur C. C. Holkoti.
Maharaja Sayaji Rao University, Baroda	Mrs. Hansa Mehta.
Gujarat University (1949)	Sri G. V. Malvankar.
Maharshtra University (1949)	Dr. M. R. Jayakar.
University of Engineering, Roorkee (1949)	

UNIVERSITIES OF INDIA

Universities	*Year of foundation or Reconstruction*	*Type*	*Faculties*
1. Agra University	1927	Affiliating	Agri., Arts, Com., Law, Med., Science, Vet. Science and Animal Husbandry.
2. Aligarh Muslim University	1921	Residential, Teaching & Unitary	Arts, Engineering Medicine (Unani), Science and Theology.
3. Allahabad Univ.	1887/ 1921	Do	Arts, Com., Law and Science.
4. Andhra University, Waltair	1926	Affiliating & Teaching	Agri., Arts, Com., Education, Engineering, Fine Arts, Law, Med. Oriental Learning and Science.

5. Annamalai Univ.	1929	Residential, Teaching & Unitary	Agri. Arts, Engineering Oriental studies, Science and Technology.
6. Hindu University, Banaras	1916	Residential & Teaching	Arts, Law, Med. Oriental Learning, Theology, Science and Technology.
7. Baroda Univ.	1949	Do	Arts, Com., Education, Fine Arts, Home Science, Med., Science, Social work and Technology.
8. Bihar University, Patna	1951	Affiliating	Agri. Arts, Commerce, Engg. Law, Medicine and Science.
9. Bombay Univ.	1857/ 1928	Affiliating & Teaching	Arts, Commerce, Law, Medicine, Science & Technology.
10. Calcutta Univ.	1857/ 1904	Do	Arts, Science, Comm., Engg. Law, Medicine and Teachers Training.
11. Delhi University	1922	Residential, Teaching & Unitary	Agri. Arts, Education Law, Med., Science and Social Science.
12. Gauhati Univ.	1948	Affiliating & Teaching	Agri. Arts, Commerce Law, Med. & Science.
13. Gujarat Univ. Ahmedabad	1950	Affiliating	Agri. Arts, Commerce, Law, Med. Science & Technology.
14. Jammu & Kashmir University	1948	Affiliating	Arts, Oriental Learning, Science & Teacher's Training.
15. Karnatak Univ. Dharwar	1950	Do	Agri. Arts, Engg. and Science.
16. Lucknow Univ.	1921	Residential, Teaching & Unitary	Arts, Comm., Law, Med. Science & Oriental Learning.

17. Madras Univ.	1857/1929	Affiliating & Teaching	Agri. Arts, Comm., Engg. Fine Arts, Law, Med., Oriental Learning, Sc., Teachers' Training Technology & Vet. Sc.
18. Mysore Univ.	1916	Do	Arts, Agri., Comm., Teachers Training, Engg., Law, Med. and Science.
19. Nagpur Univ.	1923	Do	Agri., Arts, Comm., Education, Law, Med. and Science.
20. Osmania University, Hyderabad	1918	Do	Agri. Arts, Comm., Education, Law, Med. and Science.
21. Punjab University, Solan	1947	Do	Agri. Arts. Comm., Edu., Engg., Law, Med., Oriental Learning, Science and Vet. Science.
22. Patna Univ.	1917/1951	Teaching & Unitary	Arts, Comm., Engg., Edu., Law, Med., & Science.
23. Poona University	1948	Affiliating & Teaching	Agri., Arts, Engg., Law, Med., Mental, Moral and Social Sciences and Science.
24. Rajputana Univ. Jaipur	1947	Affiliating	Arts, Comm., Education, Engg., Law, Medicine & Science.
25. Roorkee Univ.	1948	Residential, & Teaching	Engineering.
26. Saugor Univ.	1946	Affiliating & Teaching	Arts and Comm., Education, Law, Science, Technology and Vet. Science.
27. S.N.D.T. Women's Univ., Bombay	1951	Affiliating	Arts.
28. Travancore Univ. Trivandrum	1937	Affiliating & Teaching	Arts, Comm., Education, Law, Med. Oriental Studies and Fine Arts, Technology and Science.

29. Utkal University, Cuttack	1943	Affiliating	Arts, Comm., Education, Law, Medicine and Science.
30. Visva Bharati, Santineketan	1951	Residential, Teaching & Unitary	Arts, Education, Fine Arts and Science.

INSTITUTIONS OF HIGHER LEARNING NOT AFFILIATED TO UNIVERSITIES

College of Engineering & Technology—Jadavpur (*Calcutta*)—B.E.E. B.M.E., B.Ch.E.

Delhi Polytechnic, Delhi—(a) All India Diploma in (i) Elect. Engg. (2) Chem. Engg. & Tech. (3) Commerce, (4) Architecture (b) Polytechnic Diploma and certificate in Text. Tech. and Art, (c) All India Certificate in Elec. Engg. and Commerce.

Harcourt Butler Technological, Institute, Kanpur—(a) Associateship in (i) General Chemical Research (ii) Oil chem. & Tech. (b) Fellowship in (i) General Chemical Research (ii) Oil Chem. and Tech.

Indian Institute of Science, Bangalore—(a) Research Degrees of M.Sc., Ph.D. & D.Sc. of Indian Universities, (b) Associateship of I.I.Sc., (c) Dip. in Aeronautical Engg., heavy Elect. Engg. and Elect. Comm. Engg., Chemical Engg., Internal Combustion Engg. and Metallurgy.

Indian Institute of Sugar Technology, Kanpur—(a) Associateship in Sugar Tech. (A.I.I.S.T.) & Sugar Engg. (A.I.I.S.E.) (b) Fellowship in Sugar Tech. (F.I.I.S.T.) and Sugar Engg. (F.I.I.S.E.). (c) Certificate in Sugar Engg. & Sugar Boiling.

Indian Institute of Technological, Kharagpur—B. Technology.

Indian School of Mines & Applied Geology, Dhanbad—(a) Associateship in Mining & Engineering, (b) Dip. in Applied Geology, (c) Cert. in Coal Mining and Applied Geology.

Madras Institute of Technology, Madras—Post-graduate Diplomas in, (i) electronics, (ii) Aeronantical Engineering, (iii) Automobile engineering, (iv) instrument technology.

Forest College, Dharwar—Dip. in forestry.

Indian Forest College, Dehra Dun—Forest Ranger's Course (Hons. Higher Standard and Lower Standard).

Indian Forest Ranger College, Dehra Dun—Associateship of I.P.C. (Pass and Hons.).

Madras Forest College, Coimbatore—(a) Associateship of I.F.C. (Pass & Hons.) (b) Forest Rengers Cert. (Hons. Higher Standard and Lower Standard).

Indian Statistical Institute, Calcutta—Statistician's Diploma (Parts I & II), Computor's Certificate.

Statistical Branch of I.C.A.R., New Delhi—Diploma and Cert. in Agricultural Statisties.

Tata Institute of Social Sciences, Andheri, Bombay—Diploma in Social Sciences.

Indian Agricultural Research Institute, New Delhi—Associateship of I.A.R.I.

Indian Dairy Research Institute, Bangalore—Indian Dairy Diploma.

SCIENTIFIC RESEARCH INSTITUTES & LABORATORIES

B.C.G. Laboratory, King Institute of Preventive Medicine, Guindy, Madras.
Bengal Immunity Research Institute, Calcutta.
Birbal Sahni Institute of Paleobotany, Lucknow.
Bose Research Institute, 93 Upper Circular Road, Calcutta.
Botanical Survey of India, Royal Botanical Garden, Sibpur, Howrah.
Central Building Research Institute, Roorkee.
Central Coconut Research Station, Kayamkulain, Travancore.
Central Drugs Laboratory, 110 Chittaranjan Avenue, Calcutta.
Central Drugs Research Institute, Lucknow.
Central Electro-Chemical Research Institute, Kundra Road, P.O. Sekklair, Karaikudi.
Central Food Technological Research Institute, Mysore.
Central Glass & Research Institute, Jadavpur, Calcutta.
Central Inland Fisheries Research Station, Barrackpur via Calcutta.
Central Laboratories for Scientific & Industrial Research, P.O. Kumai Osmania, Hyderabad.
Central Marine Fisheries Research Station, P.o. Mandapam (Madras)
Central Potato Research Institute, Patna.
Central Research Institute, Kasauli.
Central Rice Research Institute, Nayabazar Cuttack.
Central Road Research Institute, P.o. Okhla, New Delhi.
Central Salt Research Station, Bhavnagar.
Central Sericultural Research Station, Berhampur, (W. Bengal).
Central Tobacco Research Station, Rajumundry.
Central Vegetable Breeding Station, Kulu (Punjab)
Central Water & Power Research Station, Poona.
Cigarette Tobacco Research Station, Guntur.
Deep Sea Fishing Station, Sir Pheroz Shah Rd., Bombay.
Dr. K. T. Gajjar Laboratory, Mherwan Building, Sir Pheroz Shah Rd. Bombay.
Drug Research Laboratory. Jammu.
Electronotics Laboratory, Pilani.
Fisheres Department, Marine Biological Research Station, Taraporewala Aquarium, Bombay.
Forest Research Institute, Dehra Dun.
Forest Research Laboratory, Malleswaram, Bangalore.
Fruit Research Institute, Sabour P.o. Bhagalpur.
Fruit Research Institute, Coimbatore.
Fuel Research Institute, Digwadihi, Dhanbad.
Geodetic & Research Branch, Survey of India, Dehra Dun.
Geological Survey of India. 27 Chowinghee Road, Calcutta.
Haffikine Institute, Parel, Bombay.
Hydraulic Research Laboratories, Poona.
Indian Association for the Cultivation of Science, Jadavpur, Calcutta.
Indian Cancer Research Centre, Bombay.

Indian Central Cotton Committee Technological Laboratory, Matunga, Bombay.
Indian Institute for Medical Research, Calcutta.
Indian Lac Research Institute, Ranchi.
Indian Meteorological Department, New Delhi.
Indian Tea Association Research Institute, Tookla, Assam.
Industrial Research Laboratory & Bengal Tanning Institute, Calcutta.
Institute of Radio Physics & Electronics, Calcutta.
Institute of Nuclear Physics, 92, Upper Circular Road, Calcutta.
Institute of Plant Industry, Indore.
Institute of Pychological Research & Service, Patna.
Ionoshpheric Research Station, Harringhata, Calcutta.
Jute Agricultural Research Institute, Central Jute Committee, Barrackpur.
Jute Technological Research Laboratory, Calcutta.
Laboratories of Indian Academy of Science, Malleswaram, Bangalore.
Maharashtra Association for Cultivation of Science, Poona.
Malaria Institute of India, Delhi.
National Chemical Laboratory Poona.
National Institute of Science, Mathura Road, New Delhi.
National Metallurgical Laboratory, Jamshedpur.
National Physical Laboratory, Hill Side Road, New Delhi.
Nutrition Research Laboratories, Coonor.
Oil Technological Institute, Anantapur (Madras).
Paddy Research Station, Nagina, Dist. Bijnor.
Pasteur Institute & Medical Research Institute, Shillong.
Pasteur Institute of Southern India, Coonoor.
Pasteur Institute, Patna.
Physical Research Laboratory, Ahmedabad.
Raman Research Institute, Herbbal P.O. Bangalore.
Sri Ram Institute of Industrial Research, Civil Lines, Delhi.
Sugarcane Research Station, Pusa, Behar.
Sugarcane Research Station, Poona.
Sugarcane Research Station, Shahjehanpur.
Sugar Research Institute, Coimbatore.
Tata Institute of Fundamental Research, Apollo Pier Road, Bombay.
Tobacco Research Station, Anand, (Bombay).
Tucklai Experimental Station, Cinnamara P.O. (Assam).
Zoological Survey of India, 34, Chittaranjan Avenue, Calcutta.

ENGINEERING & TECHNICAL COLLEGES

Agra University
  Engineering College, Doyalbagh, Agra—B.Sc. (Engg).
Aligarh Muslim University
  Dept. of Civil Engineering—B.Sc. (Engg.), Dip. in Engg.
  Dept. of Electrical Engineering—B.Sc. (Engg), Dip. in Engg.
  Dept. of Mechanical Engineering—B.Sc. (Engg), Dip. in Engg.
Andhra University
  College of Engineering, Kakinada—B.E.

Annamalai University

Dept. of Engineering—B.E. (Civil, Elect. and Mech., Agricultural Engineering & Structural Engineering.)

Banaras Hindu University, Banaras

Engineering College, B.Sc. (Engg.)—Elect., Mech., Civil, Aeronantic).

College of Technology—B.Sc., M.Sc., Pharm. M. Pharm., Dip. in Soap technology.

Baroda University

Engineering College, Baroda—B.E. (Civil, Elect., & Mech.).

Kala Bhavan Technical Institute, Baroda—(1) *Dip.* in Civil Engg, Elect. Engg, Mech. Engg, Architecture, Chem. Tech. and Weaving Tech. (2) *Cert* in Engg (turner, fitter, leatherman, wireman and carpentary), *Cert* in industrial tech. (dying, textile printing and weaving) and *Cert* in fine arts (draftsman, tracing and drawing).

Bihar University

Bihar Institute of Technology, Sindri—B.Sc. (Engg)—Elect. & Mech.

Bombay University

Victoria Jubilee Technical Institute, Matunga, Bombay—B.E., (Civil, Mech. & Elect.), B. Text., M.E.

Calcutta University

Bengal Engineering College, Botanic gardens, Howrah—B.E., Dip. in Town and Regional Planning, Bachelor of Architecture.

Delhi University

Delhi Polytechnic, Delhi—B.E., B. Ch. E., B. Text., B. Arch., B. Chm.

Gujarat University

Birla Engineering College, Anand—B.E. (Civil, Mech., Elect.,).

L. D. Engineering College, Ahmedabad—B.E. (Civil, Mech Elect.), M.E.

Morvi Engineering College, Morvi—F.E. (Civil, Mech., Elect.).

Karnatak University

B. V. P. College of Engineering, Hubli—B.E. (Civil).

Madras University

College of Engineering, Guindy, Madras—B.E. (Civil, Elect., Mech., Highways, Telecommunications).

College of Engineering, Anantapur—B.E. (Civil, Elect., Mech.).

Dr. A. Chettiar College of Engineering & Technology, Karaikudi —B.E. (Civil & Elect.).

Govt. College of Technology, Coimbatore—B.E. (Civil, Elect. & Mech.).

P. S. G. & Son's Charities College of Technology & Engg., Coimbatore—B.E. (Elect., Mech.).

Mysore University

College of Engineering, Bangalore—B.E. (Civil, Elect., Mech.).

B. M. Sreenivasiah College of Engineering, Bangalore—B.E.

College of Engineering, Devengre—B.E.

Sri Krishnarajendra Silver Jubilee Technological Institute, Bangalore—B.E. (Textile).

National Institute of Engineering, Mysore—B.E.

Nagpur University

Luxminarayan Institute of Technology, Nagpur—B.Sc. (Tech.), M.Sc. (Tech.).

Osmania University

University College of Engineering, Hyderabad—B.E. (Civil, Mech., Elect.).

Punjab University

Punjab College of Engineering, Roorkee—B.Sc. (Engg), (Civil, Mech., Elect.).

Technological Institute of Textiles, Bhiwani—B.Sc. (Textile).

Patna University

Bihar College of Engineering, Patna—B.Sc. (Eng.).

Poona University

College of Engineering, Poona—B.E., M.E.

New Engineering College, Sangli—B.E. (Civil).

Rajputana University

Birla College of Engineering, Pilani—B.Sc. (Elec., Mech.).

M. O. B. M. Engineering College, Jodhpur—B.Sc. (Civil).

Roorkee University

Dept. of Civil Engineering—B.E. (Civil).

Dept. of Elect. Engineering—B.E. (Elect.).

Dept. of Mech. Engineering—B.E. (Mech.).

Saugor University

Govt. Engineering College, Jabalpur—B.E., B.E., (Hons.)—Civil. Mech., Elect., & Telecommunication), M.E.

Travancore University

College of Engineering, Trivandrum—B.Sc. (Engg)—Civil, Elect., Mech. Dip. in Engg. (Civil, Elect., Mech.).

Maharaja's Technological College, Trichur—Dip. in Engg (Civil, Elect., Mech.); certificate in carpentary and cabinet making, Automobile Engineering and Electricians.

Institute of Technology, Trivandrum—Dip. in text. manufacture and text chem.; cert, in handloom and powerloom weaving; bleaching, dyeing & Printing; Hosiery manufacturing; coir weaving.

Govt. Polytechnic, Kalamasseri—Dip. in automobile engineering, Chemical Engineering, Food Technology and fisheries technology.

TECHNOLOGICAL INSTITUTION

Andhra

Andhra Polytechnic, Kakinada—Dip. in Engg. (Civil, Elect., Mech.) Fisheries Tech. Navigation overseer's certificate.

J. V. D. College of Science & Technology, Waltair—B.Sc. (Hons.) and M.Sc.

Assam

Prince of Wales Technical School, Jorhat—Dip. in Engg. (Elect.; Mech., & Aut.).

Assam Civil Engineering School, Gauhati—overseer's certificate.

Bengal

- Marine Engineering College Calcutta—Cert in Marine Engg.
- Jalpaiguri Polytechnic, Jalpaiguri—Lic. in Civil Engg.
- Calcutta Technical School, Calcutta—Dip. in Engg. (Elect., Mech.), Cert in Plumbing & Sanitary Engg.
- B. N. Ry. Apprentice Training School, Kharagpur.
- Bijoychand Institute of Engineering & Technology, Burdwan—Dip. in Engg. (Civil, Elect. & Mech.).
- Hooghly Institute of Technology, Hooghly—Lic in Civil Engg. Dip. in Draftsmanship.
- Institute of Jute Technology, Calcutta—Dip. in Jute Tech.
- K. G. Engineering Institute, Vishnupur—Lic. in Civil Engg.

Bihar

- Jamshedpur Technical Institute, Jamshedpur—Cert. in met. of Iron and Steel, and Engg. (Elect. & Mech.).
- Tirhut School of Engineering, Muzaffarpur—Dip. in Engg. (Civil & Mech.).
- Technical School, Jamalpur.

Bombay

- D. E. Society's Technical Institute, Poona—Dip. in Tech.
- A. Fazalbhoy Technical Institute, St. Xavier's College, Bombay.
- Sivaji Technical Institute, Kolhapur.
- Victoria Jubilee Municipal Technical School, Poona.
- Sir Cusrow Wadia Institute of Electrical Technology, Poona—Dip. Elect. & Radio Engg. Cert. for Draftsman (Mech.).
- King Edward VII Technical School, Dhulia.
- S. M. Parukh Parsi Polytechnic, Surat—Dip. in Engg. (Auto. Elect. & Internal combustion).
- St. Xavier's Technical Institute, Bombay—Dip. in Radio Engg., Cert in Sound Engg.

Hyderabad

- Osmania Technical College, Hyderabad (Deccan).

Madhya Bharat

- Central Technical Institute, Gwalior—Dip. in Mech. Engg.

Madhya Pradesh

- Govt. Engineering School, Nagpur—Dip. in Engg. (Civil, Elect. Mech. & Auto).

Madras

- Madras Institute of Technology, Chromepet, P.o. Chingleput.
- C. N. T. Institute, Vepery, Madras—Lic. in Engg.
  - Central Polytechnic, Madras—Lic. in Engg., Fisheries Tech. & Navigation, Printing Tech., Sanitary Engg., Civil & Sound Engg.
- Tamilnad Polytechnic, Madurai—Lic. in Engg. (Civil, Elect., Mech. & Auto).
- Kerala Polytechnic, Kozhikode—Lic. in Engg., and food tech.
- Karnatak Polytechnic, Mangalore—Lic in Engg. (Civil, Elect. and Auto).
- Vuyyuru Polytechnic, Vuyyur—Lic. in Engg. (Civil & Mech.).
- Rayalaseema Polytechnic, Bellary—Lic. in Engg. (Civil, Chem. Text.).

Ramkrishna Mission Technical Institute, Madras—Lic. in Auto. Engineering.

Oil Technological Institute—Anantpur, Dip. in Oil Tech.

Mysore.

School of Engineering, Bangalore—Lic. in Engg. (Civil, Elect. and Mech.).

J. M. Occupational Institute, Bangalore—Dip. in Engg., Radio. Tech. Cine & Sound Tech.

Silver Jubilee Technical School, Bhadravati—Dip. in Mech. Engineering.

D. R. R. Occupational Institute, Davangaee—Dip. in Engg. (Civil, Elect. & Mech.) and Oil & Soap Tech.

Occupational Institute, Chintamani—Dip. in Civil Engg. & Estimating.

S. V. L. Occupational Institute, Hassan—Dip. in Engg. (Civil, Elect. & Mech.).

Punjab

Polytechnic, Nilokheri—Overseer's Certificate.

Punjab Engineering College, Roorkee.

National Institute of Engineering, Hoshiarpur—Dip. in Mech. Engineering.

Engineering College, Civil Lines, Ludhiana—Dip. in Engg., (Elect. & Mech.) Cert. in Engg.

Govt. School of Engineering, Kalsia (Ambala).

Govt. School of Engineering, Nilokheri—Overseer's Cert. & Draughtmanship Cert.

Govt. Technical Institute, Ambala—Dip. in Auto. repairs, fitters etc.

Pepsu

Shri Viswakarma Polytechnic, Phagwara—Dip. in Engg. Elect. and Mech.) and Overseer's Course.

Rajasthan

Technical College, Rajasthan.

Birla College of Engineering, Pilani.

Technical College, Jodhpur.

M. B. H. Engineering College, Jodhpur—B. E. (Civil).

Orissa

Orissa School of Engineering, Cuttack—Lic. in Engg. (Civil, Elect. and Mech.).

Saurashtra

A. V. Parikh Technical Institute, Rajkot—Dip. in Radio Engg.

Sir Bhavsinji Polytechnic, Bhavnagar—Dip. in Engg. (Auto. & Internal Combustion), Oil Tech., Soap Tech., & Text. Tech.

Travancore-Cochin

College of Engineering, Trivandrum.

Maharaja's College, Ernakulam—Dip. in Oil Tech., Soap Tech., Aromatics, Pharmaceutics and Fine Chemicals.

Uttar Pradesh

Govt. Technical Institute, Lucknow—Dip. in Engg. (Elect. & Mech.).

Govt. Technical Institute, Gorakhpur—Dip. in Engg. (Elect. & Mech.).
Technical College, Dayalbagh, Agra—Lic. in Engg. (Elect., Mech. & Auto.).
Prem Mahavidyalaya Engineering College, Mathura—Dip. in Mech. Engineering.
I. D. Technical School, Bhajohi (Moradabad)—Dip. in Engg.
Rampur Govt. Polytechnic, Rampur.
Civil Engineering School, Lucknow—Overseer's Cert.
Hewett Engineering School, Lucknow—Overseer's Certificate.
Draftsman's School, Roorkee--Cert. in Draftsmanship.
Govt. Technical Institute, Ghazipur—Millwright Mech.

FINE ARTS

Andhra University
  Maharaja's Music College, Vizianagram—Dip. in Music.
  Sri Sarada Niketanam, Guntur—Dip. in Music.
Annamalai University, Annamalainagar
  Department of Music,—B. Music, Sangita Bhusana Title, Tamil Music Certificate.
Banaras Hindu University
  College of Music and Fine Arts, Banaras—B. A. in Music ; M. A. in Music ; Dip. in Painting and Sculpture.

Allahabad University, Allahabad
  Indian Music Junior and Senior Diplomas, Painting (diploma), Arts and Crafts (diploma).
Baroda University
  College of Indian Music, Baroda—Dip. in Vocal Music, Instrumental Music, Dancing, Dramatics and Tabla Special.
  Faculty of Fine Arts, Baroda—B. A. in (1) Vocal Music, (2) Instrumental Music, (3) Dancing, (4) Dramatics, (5) Painting, (6) Applied Art, (7) Sculpture, (8) Art and Crafts, (9) Advertising.
    Dip. in (1) painting, (2) sculpture, (3) applied art, (4) advertsing.
    Cert. in (1) lithography, (2) etching, (3) photography (4) wood craft, (5) wood carving arts.
Bombay University
  Sir J. J. School of Arts, Bombay—1—Inter. Arch, Commercial Art Section, Drawing & Painting.
Madras University
  Department of Indian Music—M. Litt., Ph.D., Dip. in Indian Music.
Patna University
  Institute of Music—Dip. and Certificate in Music.

Visva Bharati University, Santineketan
  Kala Bhavana—Dip. in fine arts & crafts and certificate in a special subject.
  Sangita Bhavana—Dip. in music & dancing & certificate in a special subject.

OTHER ARTS INSTITUTIONS

Bhatkhande College of Hindustani Music, Lucknow—(1) Sangit Visavad, (2) Sangit Pravina, (3) Sangit Acharya.
Central College of Karnataka Music, Madras—Sangit Vidwan.
Gandarva Mahavidyalaya Mandol, Poona—(1) Sangit Pravina, (2) Sangit Visarad, (3) Sangit Alankar.
Govt. School of Arts & Crafts, Calcutta—5 years' Course.
Kalakshetra, Adyar, Madras—(1) Diploma in Music, (2) Sangit Siromani.
Madhava Music College, Gwalior.
Indian Art School—Calcutta.
School of Arts, Hyderabad—Dip. in Arch.
Patna School of Arts, Patna.
Central School of Arts and Crafts, Hyderabad—Diploma and Cert. Courses in painting, sculpture and crafts.
Govt. School of Arts and Crafts, Madras.
Govt. School of Arts, Simla—Arts & Crafts Course.
Maharaja's School of Arts and Crafts, Jaipur.
Govt. School of Arts and Crafts, Lucknow—Courses in Fine Arts, Commercial Art.
Nagpur School of Arts, Nagpur.
Municipal School of Arts & Crafts, Kumbakonam, Madras—Courses in Arts, Engraving and Weaving.
Thakur Singh School of Arts, Amritsar.
Maharaja's School of Arts, Trivandrum—courses in drawing, painting, clay modelling etc.

AGRICULTURAL COLLEGES

Agra University
Agricultural College, Kanpur—B.Sc. (Agri.), M.Sc. (Agri.).
Jat Vedic Agricultural College, Baraut—B.Sc. (Agri.).
M. B. College of Agriculture, Gwalior—B.Sc. (Agri.).
Balwant Rajput College, Agra—B.Sc. (Agri.), M.Sc. (Agri.).
K. E. M. U. Jat College, Lakhoti—B.Sc. (Agri.).
Darbar College, Rewa—B.Sc. (Agri.).
Allahabad University
Agricultural Institute, Allahabad—B.Sc. (Agri.), B.Sc. (Agri. Engineering).
Andhra University
Agricultural College, Bapatla—B.Sc. (Agri.), M.Sc. (Agri.).
Annamalai University
Dept. of Agriculture—B.Sc. (Agri.).
Banaras Hindu University
College of Agriculture, Banaras—B.Sc. (Agri.), M.Sc. (Agri.), Ph.D., D.Sc.
Bihar University
Government Agricultural College, Sabour—B.Sc. (Agri.).
Calcutta University
Jhargram Agricultural College, Jhargram—I.Sc. (Agri.).

Delhi University
Central College of Agriculture, New Delhi—B.Sc. (Hous.) (Agriculture).
Gauhati University
Assam Agri. College, Jorhat—B.Sc. (Agri.), M.Sc. (Agri.).
Gajarat University
B. A. College of Agri. Anand—B.Sc. (Agri.), M.Sc. (Agri.).
Karnatak University
Agricultural College, Dharwar—B.Sc. (Agri.), M.Sc. (Agri.).
Madras University
Agricultural College, Coimbatore—B.Sc. (Agri.).
Mysore University
Agricultural College, Bangalore—B.Sc. (Agri.).
Nagpur University
College of Agriculture, Nagpur—I.Sc. (Agri.), B.Sc., (Agri.).
G. S. College of Science & Agriculture, Khamgaon—I.Sc. (Agri.), B.Sc. (Agri.).
Osmania University
Univ. College of Agriculture, Hyderabad—B.Sc. (Agri.).
Poona University
College of Agriculture, Poona—B.Sc. (Agri.), M.Sc. (Agri.).
Punjab University
Govt. Agricultural College, Ludhiana—I.Sc. (Agri.), B.Sc. (Agri.), M.Sc. (Agri.).
Khalsa College, Amritsar—I.Sc. (Agri.), B.Sc. (Agri.).
Brijindra College, Faridkot—I.Sc. (Agri.).
Rajputana University
S. K. N. A. College, Jobner (Jaipur)—I.Sc. (Agri.), B.Sc. (Agri.).

Other Agricultural Institutions

Bangal
Agricultural College, Jhargram, Midnapur.
State Agricultural College, Tollyganj, Calcutta.
College of Engineering & Technology, 24 Pargs., Bengal.
Chinsura Secondary Agricultural School, Chinsura.
Kutch
Agricultural College, Vandhay, Sadan Vedi, Kutch.
U.P.
Govt. Agricultural School, Bulandshaen.
Govt. Agricultural School, Gorakhpur.
Govt. Agricultural School, Chirgaon, Jhansi.
Govt. Agricultural School, Hawalbagh, Almora.
Govt. Agricultural School, Ghazipur.

FORESTRY

Indian Forest Rangers College, Dehra Dun—Associateship of I.F.C. (pass & honours).
Indian Forest College, New Forest, Dehra Dun—Forest Rangers Course (Hons., higher standard and lower standard).

Madras Forest College, Coimbatore—Associateship of I.F.C. (pass & honours), Forest Rangers certificate (Hons., higher standard and lower standard).
Forest College, Dharwar—Dip. in forestry.

LEATHER

Calcutta University—B.Sc. (Tech.) in leather technology.
Bengal Tanning Institute, Calcutta—certificate in tanning.
Govt. Leather Working School, Bandara, Bombay—Diploma in leather tech.
Govt. Tanning Institute, Bandara, Bombay—Dip. in leather tech.
Govt. Tanning Institute, Jullundur city—Dip. in leather chemistry and Tech.
Leather Working School, Dayalbagh, Agra—Diploma Course.
Sri J. Occupational Institute, Bangalore—Diploma Course.
Alagappa Chettiar College of Technology, Guindy, Madras—B.Sc. (Tech.) in leather.
Institute of Leather Technology, Washermanpet, Madras—Dip. in leather tech.
Leather Research Insttute, Madras.

TEXTILE

Punjab Institute fo Textile Technology, Amritsar—Dip. in text. Tech.
Govt. Institute of Dyeing & Calico Printing, Ludhiana—Dip. in Dyeing.
Govt. Weaving Institute, Gauhati.
Bengal Textile Institute, Serampore (W. Bengal)—Dip., in Text.
Textile Institute, Berhampore (W. Bengal)—Lic. in Text.
Victoria Jubilee Technical Institute, Bombay—B. Text. Degree, L.T.M. Dip.
Delhi Polytechnic, Delhi—B. Text. Degree (Delhi University).
Central Technical Institute, Lashkar (Madhya Bharat)—Dip. in text. technology.
Alagappa Chettier College of Technology, Guindy, Madras—B.Sc. (Tech.) of Madras University.
Government Textile Institute—Madras.
P. S. G. & Sons Charity Industrial Institute, Coimbatore—L.T.M. Dip. in Textile.
Institute of Textile Technology, Trivandrum—Dip. in Textile manufacture.
Sri Krishnarajendra Silver Jubilee Technological Institute, Bangalore—Cert. in Textile Technology, Artisan's Course.
Technological Institute of Textiles, Bhivani (Punjab)—B.Sc. (Text.) of Punjab University.
Institute of Textile Technology, Amritsar—Dip. in textile Technology.
Govt. Institute of Dyeing & Calico Printing, Ludhiana.
R. C. Technical Institute, Ahmedabad—Dip. in Text. manufacture.

Bhavsinji Polytechnic Institute—Bhavinagar—Dip. in text. manufacture.
Govt. Central Textile Institute, Kanpur—Dip. and certificate in text. technology, etc.
Govt. Central Weaving Institute, Banaras—Dip. in weaving.

PHYSICAL EDUCATION

Andhra Training College of Physical Education, Vijayawada—Dip. in Physical Education.
Christian College of Physical Education, Lucknow—Dip. in Physical Education.
College of Physical Education, Muzaffarpur—Dip. in Physical Education.
Govt. College of Physical Education, Allahabad—Dip. in Physical Education.
Govt. College of Physical Education, Hyderabad—Dip. in Physical Education.
Govt. College of Physical Education, Calcutta—Dip. in Physical Education.
Govt. Physical Training College, Rupur—Dip. in Physical Education.
Govt. College of Health & Physical Education, Patna—Dip. in Physical Education.
Training Institute for Physical Education, Kandivali (Bombay)—Dip. in Physical Education.
Y.M.C.A. College of Physical Education, Madras—Madras Univ. Dip. in Physical Education.
School of Physical Education, Tara Devi, Simla—Dip. in Physical Education.

MINING

Indian School of Mines & Applied Geology, Dhanbad—Associateship in mining engineering, Dip. in applied geology, certificates in coal-mining & applied geology.
College of Mining & Metalurgy, Banaras Hindu University—Post graduate research (Ph.D.) degree; B.Sc. (mining).
Sitarampur Mining School, Sitarampur (Bengal)—Mine engineer's certificate.
Jayachamarajendra Occupational Institute, Bangalore—Dip. in mining.

JOURNALISM

Calcutta University, Calcutta
Department of Journalism—Dip. in Journalism.
Punjab University, Simla
Department of Journalism—Dip. in Journalism.
Madras University, Madras
Diploma Course.
Nagpur University, Nagpur
Diploma in Journalism.

LIBRARIANSHIP

Aligarh Univesity, Aligarh
Cert. in Librarianship.
Calcutta University
Dept. of Librarianship—Dip. in Librarianship.
Bombay University
Bombay Univ. Library—Dip. in Librarianship.
Delhi University
Dept. of Library Science—Dip. in Library Science; Master of Library Science.
Andhra University, Waltair
One year Dip. Course.
Banaras Hindu University, Banaras
Dip. in Library Science.
Punjab University, Simla
Certificate Course on Librarianship.
Madras University, Madras
Dip. and certificate course.

CERAMICS

Govt. Ceramic Institute, Gudur (Nellore)—Lic. in Ceremics.
Bengal Ceramic Institute, Calcutta—Advanced Course in Ceramics.

SPORTS—INDIAN AND WORLD

INDIAN CRICKET

Foreign Teams in India

G. F. Vernon's Team—(1889-90). Played 12 ; won 10, lost 1 and drawn 1. Captain—G. F. Vernon.

Lord Hawke's Team—(1892-1893). Played 23 ; won 15, lost 2 and drawn 6. Captain—Lord Hawke.

Oxford University Authentics—(1902-3). Played 19; won 12; lost 2 and drawn 5. Captain—K. J. Key.

M. C. C. Official Team—(1925-26). Played 34 ; won 11 ; drawn 23 and lost none. Captain—A. E. R. Gilligan.

All Ceylon Team (1932-33)—Played 10; won 2; lost 1; drawn 7. Captain—Dr. C. H. Gunasekara.

M. C. C. Team (1933-34)—Played 34; won 17; drawn 16 and lost 1; Captain—D. R. Jardine.

Australian Team (Unofficial 1935-36)—Played 23; won 11; lost 3; drawn 9. Captain—J. Ryder.

Lord Tennyson's Team (1937-38)—Played 24; won 8; lost 5 and drawn 11. Captain—Lord Tennyson.

Second All-Ceylon Team (1940-41)—Played 5; won 1; lost 1; drawn 3. Captain—S. S. Jayawikrama.

Australian Services XI (1945-46)—Played 9 ; won 1 ; lost 2 ; drawn 6. Captain—A. L. Hasset.

West Indies Team (1948-49)—Played 17, won 5; lost 1; drawn 11. Captain—John Goddard.

1st Commonwealth Team (1949-50)—Played 19 ; won 8 ; lost 2 ; drawn 9. Captain—L. Livingstone.

2nd. Commonwealth Team (1950-51)—Played 25 ; drawn 13 ; won 12 ; played 5 unofficial Test matches, won 2, drawn 3. Captain—L. E. G. Ames.

M.C.C. Team (1951-52)—Played 18 ; won 7 ; lost 1 ; drawn 10 ; Test match played 5; won 1; lost 1; drawn 3. Captain—N. D. Howard.

Pakistan Team (1952)—Played 12; won 1; lost 2; drawn 9. Captain—A. H. Kardar.

Indian Teams Abroad

First Parsi Team in England (1886)—Played 28; won 1; lost 19; drawn 8. Captain—Patel.

Second Parsi Team (1888)—Played 31; won 8; lost 11; drawn 12. Captain—P. D. Kanoa.

Maharaja of Patiala's Team in England (1911)—Played 23; won 6; lost 15; drawn 2. Captain—Maharaja of Patiala.

All India Team in England (1932—Played 36; won 13; lost 9; drawn 14. Captain—Maharaja of Porabandar.

All India Team in England (1936)—Played 31; won 5; lost 13; drawn 13. Captain—Maharajkumar of Vijianagaram.

All India Team in Ceylon (1945)—Played 5; won 2; lost 0; drawn 3. Captain—V. M. Merchant.

All India Team in England (1946)—Played 33; won 13; lost 4; drawn 16. Captain—Nawab of Pataudi.

All India Team in Australia (1947-48)—Played 19, won 4; lost 7; drawn 8. Captain—Lala Amarnath.

All India Team in England (1952)—Played 35; won 6; lost 5; drawn 24; Test match played 4; won 0; lost 3. Captain—V. S. Hazare.

All India Team in West Indies (1953)—Played 11; lost 1; won 1 ; drawn 9. Captain—V. S. Hazare.

Official Test Matches

India v. England Test

		Match played	*Eng. won*	*India won*	*Drawn*
1932 In England	..	1	1	0	0
1933-34 In India	..	3	2	0	1
1936 In England	..	3	2	0	1
1946 In England	..	3	1	0	2
1951-52 In India	..	5	1	1	3
1952 In England	..	4	3	0	1

India v. Australia Test

		Match played	*Australia won*	*India won*	*Drawn*
1947-48 In Australia	..	5	4	0	1

India v. West Indies Test

		Match played	*West Indies won*	*India won*	*Drawn*
1948-49 In India	..	5	1	0	4
1953 In W. Indies	..	5	1	0	4

India v. Pakistan Test

		Match played	*Pakistan won*	*India won*	*Drawn*
1952 In India	..	5	1	2	2

TEST RECORDS

For India

Highest total for an innings—485 (9 wkts. dec.) *v.* England Bombay, 1951-52.
Lowest totals for an innings—58 *v.* Australia, Brisbane, 1947-48, —58 *v.* England, Old Tafford, 1952.
Highest Individual Score—184 Mankad *v.* England, Lords, 1952.
Most wickets in an innings—8 for 51 Mankad *v.* Pakistan, Delhi, 1952.
Most wickets in a match— 13 for 131 Mankad *v.* Pakistan, Delhi.
Mostwickets in a match—13 for 131 Mankind *v.* Pakistan, Delhi, 1952.
Century in each Innings—116 & 145 *v.* Hazare *v.* Australia, Adelaide, 1947-48.

Against India

Highest total for an innings—674 by Australia, Adelaide, 1947-48.
Lowest total for an innings—107 by Australia, Sydney, 1947-48.
Highest individual score—217 by Hammond (England), Oval, 1936.
Most wickets in a series—29 for 386 by Trueman (England), 1952.
Most centuries in a match—6 (Australia 3; India 3), Adelaide, 1947-48.
6 (W. Indies 3; India 3), Kingston, 1953.
Most wickets in a match—12 for 94—Fazal Mahmood (Pakistan), Lucknow, 1952.
Most runs in a series—779; E. Weeks (West Indies) 1948-49.
Highest test score—237 by F. Worrel (West Indies), Kingston, 1953.

CRICKET CHAMPIONSHIP OF INDIA

Winners of Ranji Trophy

(*Inaugurated in* 1934-35)

[*A gold cup presented by the Maharaja of Patiala in memory of the famous Indian Cricketer, Prince Ranjitsinji.*]

1934-35 and 1935-36 Bombay; 1936-37 Nawanagar; 1937-38 Hyderabad; 1938-39 Bengal; 1939-40 and 1940-41 Maharashtra: 1941-42 Bombay; 1942-43 Baroda; 1943-44 Western India; 1944-45 Bombay; 1945-46 Holkar; 1946-47 Baroda: 1947-48 Holkar; 1948-49 Bombay; 1949-50 Baroda; 1950-51 Holkar; 1951-52 Bombay; 1952-53 Holkar.

Ranji Trophy Records

Great Totals

912—Holkar *v.* Mysore for 8 wickets 1945.

826—Maharashtra *v.* Western India States 1948.

798—Maharashtra *v.* Northern India, 1940.

784—Baroda *v.* Holkar 1946.

760—Bengal *v.* Bombay, 1951-52.

764—Bombay *v.* Holkar, 1944.

757—Holkar *v.* Hyderabad, 1950.

735—Bombay *v.* Maharashtra, 1943.

725—Bombay *v.* Maharashtra for 8 wickets, 1950.

714— Do Do for 8 8 wickets, 1948.

675—Maharashtra *v.* Bombay, 1940.

658—S. Punjab *v.* N. India for 8 wickets, 1945.

650—Maharashtra *v.* Baroda for 9 wickets, 1949.

651—Bombay *v.* Maharashtra, 1941.

645—Bombay *v.* Baroda, 1945.

638—Bombay *v.* Sind for 8 wickets, 1947.

632—Bombay *v.* Maharashtra for 7 wickets, 1947.

620—Bombay, *v.* North India, 1949.

618—Holkar *v.* Bengal, 1942.

613—N. India *v.* N.-W.F.P. for 7 wickets, 1941.

World record for any wicket—By Gul Mahomed and Hazare (4th wicket partnership)—577 runs *v.* Holkar (1946), (*highest score for any wicket*).

Most individual centuries in an innings—6 centuries by Holkar *v.* Mysore 1945-46—a world record.

Highest aggregate in one innings—1325 runs by Maharashtra *v.* Bombay at Poona (1941-42).

Lowest Victory—By one run, Bengal *v.* Bihar (1941-42).

Smallest Totals—22 runs, S. Punjab *v.* N. India (1934).

Highest Individual Scores in the Ranji Trophy

*443—B. B. Nimbalkar (Maharashtra) against Western Indian States (1948-49).

*359—V. M. Merchant (Bombay) against Maharashtra 1943-44).

319—Gul Mahomed (Baroda) against Holkar (1946-47).

*316—V. S. Hazare (Maharashtra) against Holkar (1944-45).

288—Hazare (Baroda) against Holkar (1946-47).

278—V. M. Merchant (Bombay) against Holkar (1944-45).

*249—D. Compton (Holkar) (1944-45).

246—D. B. Deodhar (Maharashtra) against Bombay (1940-41).

*245—R. S. Modi (Bom.) against Baroda (1944-45).

*234—V. M. Merchant (Bombay) against Sind (1945-46).

233—S. Mustaq Ali (Holkar) against U. P.

217—V. M. Merchant (Bombay) against W. India (1944).

217—U. M. Merchant (Bom.) against Hyderabad (1947).

*230—K. C. Ibrahim (Bom.) against N.-W. India (1941-42).

Rohinton Baria Inter-University Cricket

[Gold cup presented by Mr. A. D. Baria of Bombay to perpetuate the memory of his son, Rahinton Baria who died at an early age.]

1935-37 Punjab University; 1938-42 Bombay University; 1943 Punjab University; 1944-49 Bombay University; 1950-51 Mysore University; 1952 Bombay University.

FOOTBALL

I. F. A. Shield, Calcutta

(Started in the year 1893)

1930 Seaforth Highlanders; 1931 H. L. I.; 1932 2nd Bn. Essex Regt.; 1933 D. C. L. I.; 1934 *Game abandoned*; 1935 East Yorks; 1936 Mahomedan Sp.; 1937 6th Field Brigade; 1938 East Yorks; 1939 Police A.C.; 1940 Aryans; 1941-42 Mahomedan Sp.; 1943 East Bengal; 1944 B. & A. Rly.: 1945 East Bengal; 1946 *Tournament abandoned*; 1947 Mohan Bagan; 1948 Mohan Bagan; 1949-51 East Bengal; 1952 Mohan Bagan 2, 0; Rajasthan 2, 0 (Tournament abandoned). 1953: East Bengal *b.* India Culture League (Secun.)—Game undecided.

- *First year's winner*: Royal Irish Rifles, 1893.
- *Champions (3 successive years)*: Gordon Highlanders (1908-10); Calcutta F. C. (1922-24); Sherwood Foresters (1926-28); East Bengal (1949-51).
- *Winners of the highest number of times*—Calcutta F. C.—9 times.

Rovers Cup, Bombay

(Started in the year 1891)

1930 K. O. S. B.; 1931 Royal W. Kents; 1932 Royal Irish Fusiliers; 1933 King's Liverpool Regt.; 1934 Sherwood Foresters; 1935-36 King's Liverpool Regt.; 1937-38 Bangalore Muslims; 1939 28th Fiend Brigade; 1940 Mahomedan Sporting, Calcutta: 1941 welch Regiment; 1942 Bata Sp. Club (Calcutta); 1943 R. A. F.; 1944 British Base Reinforcement Camp; 1945 Military Police; 1946 British Base Reinforcement Camp; 1947 Tournament abandoned due to stand collapse; 1948 Bangalore Muslims; 1949 East Bengal; 1950-53 Hyderabad Police;

Durand Cup, Delhi

(Started in the year 1888)

1950 Hyderabad Police; 1951-52 East Bengal; 1953 Mohan Bagan.

National Football Championship

(Santosh Memorial Trophy)

[The trophy for the championship was donated by the I.F.A. (Bengal at a cost of Rs. 1,500 to perpetuate the memory of the late

Raja Manmatha Nath Ray Chaudhury of Santosh, who was the president of the I.F.A. for many years.]

1941	Bengal.	1948	No Play.
1940	Bengal.	1949	West Bengal.
1942-43	No Play.	1950	West Bengal.
1944	Delhi.	1951	West Bengal.
1945	Bengal.	1952	Mysore.
1946	Mysore.	1953	West Bengal.
1947	Bengal.		

Inter-University Football Championship

1940	*not completed.*	1947	Madras.
1941	Calcutta.	1948	Madras.
1942	Punjab.	1949	Mysore.
1943	*not completed.*	1950	Calcutta.
1944	Punjab.	1951	Nagpur.
1945	Aligarh.	1952	Travancore.
1946	Mysore.	1953	Calcutta.

HOCKEY

Beighton Cup, Calcutta

(*Started in the year 1895*)

1931-32 Cal. Custom ; 1933 Jhansi Heroes ; 1934 Cal. Rangers ; 1935 Cal. Customs ; 1936 Bombay Customs ; 1937 B. N. Railway (Kharagpur) ; 1938 Cal. Customs ; 1939 B. N. Ry.; 1940 Bhopal Wanderers ; 1941 Bhagwant Club (Tricumgarh) and Bhopal Wanderers ; 1942 Cal. Rangers ; 1943-45 B. N. Ry. (Kharagpur) ; 1946 Port Commissioners (Cal.) ; 1947 No game ; 1948 United Provinces & Port Commissioners (Calcutta) ; 1949-50 Tata S. C. (Bombay) ; 1951 Hindustan Aircraft (Bangalore) ; 1952 Mohan Bagan ; 1953 Tata Sports (Bom.).

First year's winners—Naval Volunteers 1895-96.

Highest number of winners—Calcutta Customs—11 times.

Aga Khan Cup, Bombay

1934 Bombay Customs ; 1935 Bombay Customs ; 1936 Bombay Customs ; 1937 Lahore Y. M. C. A.; 1938 Bhagwant Club (Tricumgarh) ; 1939 Bhopal Wanderers ; 1940 B. B. C. I. Ry.; 1941 Bhagwant Club (Tricumgarh) ; 1942 No play ; 1943 G. I. P. Ry.; 1944 Kamala Club (Kanpore) ; 1945 Kamala Club (Kanpore) ; 1946 Kalyanmal Mills (Indore) ; 1947 Rawalpindi Spartans ; 1948 Kirkee United; 1949 East Punjab Police; 1950 Tata Sports; 1951-52 Tata Sports (Bombay) ; 1953 Lusitanians (Bom.).

National Hockey Championship

(*Started in 1928*)

1928 U. P.; 1930 Railways ; 1932 Punjab ; 1934 No game ; 1936 Bengal ; 1938 Bengal ; 1940 Bombay ; 1942 Delhi ; 1944 Bombay ;

1945 Bhopal; 1946 Punjab; 1947 Punjab; 1948 Bhopal; 1949-51 East Punjab; 1952 Bengal; 1953 Services.

Women's National Hockey Championship

Indugurated in 1938—Lady Ratan Tata Trophy

1938 .. Kharagpur
1939 .. Calcutta.
1947 .. Bombay.
1948 .. Bombay.
1949 .. Bombay.
1150 .. M. P.
1951 .. Bombay.
1952 .. Bombay.
1953 .. Bombay & Bengal.

National Badminton Championships 1953

Men's Singles—N. Natekar (Bom.).

Women's Singles—Miss Rege (Bom.).

Women's Doubles—Miss Rege & Miss Bhatt (Bom.).

Men's Doubles—Monoj Guha & Hemmady (Ben.).

Mixed Doubles—N. Natekar & Miss Bhatt (Bom.).

PROVINCIAL BADMINTON CHAMPIONSHIP

1944 .. Delhi.
1945 .. Punjab.
1946 .. Punjab.
1947 .. Bombay.
1948 .. No tournament.
1949 .. Bombay.
1950 .. Bombay.
1951 .. Bombay.
1952 .. Bombay.
1953 .. Bombay.

INTER-STATE TABLE TENNIS

1949 .. Bengal.
1950 .. Bengal.
1951 .. Bengal.
1952 .. Bengal.

Table Tennis Champions
Men's Singles

1950 .. K. Jayant (Bengal)
1951 .. T. Tiruvendadam (Madras)
1952 .. K. Jayant (Bengal)
1953 .. S. K. Thackersey (Bombay).

National Table Tennis 1953

Men's Singles—S. K. Thackersay (Bom.).

Men's Doubles—V. M. Chandrana & D. P. Somayya

Women's Singles—Miss S. Rege (Bom.).

Women's Doubles—Miss Sultana & Mrs. *v.* Rajagopalan.

Mixed Doubles—Mrs. Sultana & R. Bhandari.

BILLIARD CHAMPIONS

1941—V. R. Freer (Madura).
1942—V. R. Freer (Madura).
1943-45—*No game.*
1946—C. Hirajee (Calcutta).
1947—C. Hirajee (Calcutta).
1948—V. R. Freer (Madura).
1949—T. A. Selveraj (Bangalore).
1950—Wilson Jones (Bombay).
1951—Wilson Jones (Bombay).
1952— Do.

WOMEN'S RECORDS IN INDIA

100 metres run	D. Beek (Bengal) 1948	12·4 s.
200 metres run	Mary D'Souza (Bom.) 1952	26·1 s.
Running High Jump	Miss U. Lyons (Punjab)	4 ft. 11¾ in.
80 metres hurdles	Mary D'Souza (Bom. 1953)	12·7 s.
Shot put	M. Yates (All. 1941)	31 ft. 10½ in.
400 Do. do.	Dolly Nazir (Bom. 1953)	7 m. 21·9 s.
Discuss Throw	Miss Gilbert (Bom.) 1942)	92 ft. 0 in.
Javelin Throw	N. Duke (Punjab)	91 ft. 8 in.
Broad Jump	Christine Brown (Bangalore, 1953)	17 ft. 4 in.
Putting the Shot	Miss Gilbert (Bom.)	29 ft. 11 in.
100 metres Breast Stroke	Dolly Nazir (Bom. 1950)	1 m. 38 s.
100 metres Free Style	Miss P. Ballantyne (Bom. 1947)	1 m. 18·6 s.
100 metres Back Stroke	T. Macclumpha (Bom.) 1949)	1 m. 39 s.

SOME ALL INDIA SPORTS RECORDS

Hop Step and Jump	H. Rebello (Mysore)	'48	50 ft. 2 in.
Pole Vault	S. George (Services)	..	12 ft. 3 in.
Hammer throw	Kishon Singh	'51	155 ft. 4½ in.
Discus throw	Makhan Singh	'51	140 ft. 8½ in.
Javelin throw	E. Whither (Punjab)	'33	183 ft. 2¾ in.
Shot Put	Praduman Singh (Services)		46 ft. 4⅜ in.
High Jump	Ajit Singh (Punjab)	..	6 ft. 3½ in.
Long Jump	Niranjan Singh	'34	23 ft. 10½ in.
100 yards run	R. A. Verneaux (Ben.)	'34	9·7 s.
200 „ „	E. Whiteside (Punjab)	'36	21·8 s.
440 „ „	G. P. Bhalla „	'34	50·0 s.
One Mile	Chand Singh (Patiala)	'38	4 m. 25·6 s.
Three Miles	Raunak Singh „	'34	15 m. 3·7 s.
Five Miles	Gujjar Singh (Punjab)	'34	27 m. 10 s.
Six Miles	Raunak Singh (Patiala)	'35	31 m. 33·5 s.
100 meters run	Lavy Pinto (Bom.)	'53	10·6 s.
200 „ „	Lavy Pinto (Bom.)	'53	21·8 s.
400 „ „	Ivan Jacob (Mad.)	'53	49·6 s.
800 „ „	Sohan Singh (Services)	'53	1 m. 54·2 s.
1,500 „ „	Chand Singh	'44	4 m. 4·2 s.
3,000 „ „	Chand Singh	'44	8 m. 49·9 s.
5,000 „ „	Raunak Singh	'36	15 m. 9·4 s.
10,000 „ „	Raunak Singh	'36	32 m. 2·6 s.
15,000 „ „	C. S. A. Swami (Bom.)	..	58 m. 16·4 s.
20,000 „ „	C. S. A. Swami (Bom.)	..	1 h. 16 m. 0 s.

30,000 „ „	.. R. G. Michael „	..	2 h. 13 m. 50 s.
Marathon	.. Chota Singh (Pepsu)	'53	2 h. 42 m. 33·6 s. sec.
10,000 M. walk	.. Raunak Singh (Patiala)	'49	52 m. 29 s.
50 kilometres walk	.. Bakhtwar Singh (Patiala)	'44	5 h. 15 m. 8·4 s.
4×100 m. relay	.. Services Team	'53	42·5 s.
1,600 „ „	.. Bombay Team	'50	50 m. 26 s.

INDIAN SWIMMING RECORDS

Free Style			
100 m. ..	Sachin Nag (Bengal)	1950	1 m. 3·9 s.
200 m. ..	Bimal Chandra do	1952	2 m. 34·3 s.
400 m. ..	do do	1950	5 m. 30·6 s.
Back Store			
100 m. ..	Kanti Saha (Bombay)	1952	1 m. 15·3 s.
200 m. ..	do do	1952	2 m. 47·2 s.
Breast Stroke			
100 m. ..	Prafulla Mullick (Ben.)	1950	1 m. 23·6 s.
200 m. ..	Prafulla Mullick (Ben.)	1952	3 m. 5·2 s.
Butterfly			
100 m. ..	Prafulla Mullick (Ben.)	1952	1 m. 21 s.
200 m. ..	Prafulla Mullick (Ben.)	1952	3 m. 14·6 s.

CRICKET

Summary of Test Matches

England v. South Africa

First played 1888-89 ; England won 37 ; South Africa 13 ; 29 matches drawn.

England v. New Zealand

First played 1929-30 ; England won 4 ; matches drawn 15 and N.Z won 0.

England v. India

First played 1932 ; England won 10 ; India won 1 and 8 matches drawn.

England v. Australia

First played 1876-77 ; England won 57 ; Australia 68 and 38 matches drawn.

England v. West Indies

First played 1928 ; England won 9 ; West Indies won 8 and 8 matches drawn.

Australia v. South Africa

First played 1902-3 ; 2 Australia won 24 ; South Africa won 3 and 7 matches drawn.

Australia v. West Indies

First played 1930-31 ; Australia won 8 and West Indies won 2.

Australia v. India

First played 1947-48 ; Australia won 4 and one match drawn.

Australia v. New Zealand

First played 1945-46 ; Australia won 1.

India v. West Indies

First played 1948-49 ; West Indies won 2 and 4 matches drawn.

South Africa v. New Zealand

First played 1931-32 ; South Africa won 3, New Zealand 0 and 1 match drawn.

West Indies v. New Zealand

First played 1951-52 ; West Indies won 1 and 1 match drawn.

India v. Pakistan

First played 1952 ; India won 2 ; Pakistan 1 ; Drawn 2.

Test Match Records

Highest Match Aggregates—1981 runs (35 wickets)—England vs. South Africa at Durban, 1939.

Lowest Match Aggregates—234 runs (30 wickets)—Australia vs. South Africa, Melbourne, 1932.

Highest totals—903 (7 wkts. dec.) for England vs. Australia, Oval, 1938.

Lowest totals—30 for South Africa vs. England, 1895 and 1924.

Highest Aggregate by a side in a match—1121 (19 wkts.)— England vs. West Indies, Kingston, 1930.

Lowest Aggregate by a side in a match—81 (20 wkts.) South Africa vs. Australia at Melbourne, 1932.

Most Hundreds—29, D. G. Bradman (Australia).

Highest Individual Innings—364 runs, L. Hutton (England) vs. Australia, Oval 1938.

Most hundreds in a test match—Seven, England vs. Australia at Nottingham 1938 (Barnett 126, Paynter 216*, L. Hutton 100, D. Compton 102 (Eng.)—S. McCabbe 232, W. Brown 133, D. G. Bradman 144* (Australia).

Most wickets (Bowling)—216 for 37 runs—C. V. Grimmett (Australia).

Hundreds in consecutive innings—Five by Everton Weeks.

141 (*vs.* England, Kingston 1947-48).
128 (*vs.* India, Delhi 1948-49).
194 (*vs.* India, Bombay 1948-49).
162 & 101 (*vs.* India, Calcutta 1948-49).

Longest Test Match—South Africa *v.* M. C. C. (1939), for 10 days.

Record Individual Scores—First-Class Matches

*452 Bradman ..	1930	344 Grace ..	1876
*443 B. B. Nimbalkar ..	1948-49	*343 Perrin ..	1904
437 Ponsford ..	1928	341 Hirst ..	1905

429	Ponsford	1923	340	Bradman	1929
424	A. C. MacLaren	1895	338	Read	1888
383	Gregory	1906	338	Blunt	1932
369	Bradman	1935-36	*336	Hammond	1933
368	Hutton	1938	336	Ponsford	1928
*365	Hill	1900	333	Bradman	1930
364	Hutton	1938	333	Duleepsinghji	1930
*357	Abel	1899	325	Sandham	1930
352	Ponsford	1927	321	Murdock	1882
*344	Headley	1932			

*Not out.

World Cricket Records—First Class

Highest Totals (1st class)—1,107 Victoria v. New South Wales (Australia) 1926-27.

Highest Individual Score—452 (not out) D. G. Bradman, 1929-30.

Highest individual Score in test match—364 L. Hutton, England v. Australia, oval, 1948.

First Wicket Partnership—555 Holmes and Sutcliffe, Yorkshire vs. Essex, 1932.

Second Wicket Partnership—455 by B. B. Nimbalkar and K. V. Bhandarkar, Maharashtra v. Western India States 1948-49.

Third Wicket Partnership—475 by Ponsford (21 not out) and McCabe (192) against M. C. C., 1934.

Fourth Wicket Partnership—577 by V. S. Hazare (288) and Gul Mahomed (319), Baroda vs. Holkar, 1946-47.

Aggregates—J. B. Hobbs—61,221 ; W. G. Grace—54,896.

Highest Aggregate—Bombay 651 and 714 for 6 dec. v. Maharashtra.

Most Centuries in an innings—Six individual centuries by Holkar v. Mysore in Ranji Trophy, 1944-45.

MEN'S WORLD TRACK & FIELD RECORDS

Running

100 yards	M. Patton (U.S.A.)	9·3 s. (1948)
220 yards	M. Patton (U.S.A.)	20·2 s. (1949)
880 yards	M. Whitfield (U.S.A.)	49 m. 22·2 s. (1946)
One mile	G. Haegg (Sweden)	
Two miles	G. Haegg (Sweden)	8 m. 42·8 s. (1944)
Six miles	V. Heino (Finland)	28 m. 30·8 s. (1949)
Ten miles	E. Zatopek (C'slovakia)	48 m. 12 s. (1951)
15 miles	Mikko Hietanen (Finland)	1 h. 17 m. 28·6 s. (1948)
26 m. 385 yds.	K. Son (Japan)	2 h. 29 m. 19·2 s. (1936)
100 metres	E. Med. Bailey (G.B.)	10·2 s. (1951)
	J. Owens (U.S.A.)	10·2 s. (1936)
	L. LaBech (Pranama)	10·2 s. (1948)
	H. Davis (U.S.A.)	10·2 s. (1941)
	N. H. Ewell (U.S.A.)	10·2 s. (1948)

200 ,,	Mel Patton (U.S.A.)	20·2 s. (1949)
800 ,,	R. Harbig (Germany)	1 m. 46·6 s. (1939)
1,000 ,,	M. Hansenne (France)	2 m. 21·4 s. (1948)
1,500 ,,	E. Strand (Sweden) G. Haegg (do)	3 m. 43 s. (1947) 3 m. 43 s. (1944)
2,000 ,,	G. Reiff (Belgium)	5 m. 7 s. (1948)
3,000 ,,	G. Reiff (Belgium)	7 m. 58·8 s. (1949)
5,000 ,,	G. Haegg (Sweden)	13 m. 58·2 s. (1942)
10,000 ,,	E. Zatopek (C' slovakia)	29 m. 2·6 s. (1950)
20,000 ,,	Do	59 m. 51·7 s. (1951)
25,000 ,,	M. Heitanan (Finland)	1 h. 20 m. 14 s. (1948)
30,000 ,,	J. Z. Maskatchenkov (U.S.S.R.)	1 h. 38 m. 54 s. (1949)

Walking

3,000 metres	W. Hardmo (Sweeden)	11 m. 51·8 s. (1945)
5,000 ,,	Do (Sweden)	20 m. 26·8 s. (1945)
10,000 metres	W. Hardmo (Sweden)	42 m. 39·6 s. (1945)
20,000 ,,	J. Mikaelson (do)	1 h. 32 m. 28·4 s. (1942)
30,000 ,,	H. Olsson (Sweden)	2 h. 28 m. 57·4 s. (1943)

Hurdles (10 Hurdles)

120 yds.	R. A. Attlesey (U.S.A.)	13·5 s. (1950)
440 yds.	A. Filiput (Italy)	51·9 s. (1950)

Jumping

Broad Jump	J. Owens (U.S.A.)	26 ft. 8¼ in. (1935)
High Jump	L. Steers (U.S.A.)	6 ft. 11 in. (1941)
Hop, Step and Jump	A. F. DaSilva (Brazil)	52 ft. 6¼ in.
Pole Vault	C. Warmerdam (U.S.A.)	15 ft. 7¾ in. (1942)

Throwing

Discus	F. Gordien (U.S.A.)	186 ft. 11 in. (1949)
Javelin	Y. Nikkanen (Finland)	258 ft. 2⅜ in. (1938)
Hammer Throw	Imry Nemeth (Hungary)	196 ft. 5½ in. (1950)

Decathlon

8, 042 points	Robert Mathias (U.S.A.)	1950

MEN'S WORLD SWIMMING RECORDS

Free Style

100 yds.	R. Cleveland (U.S.A., 1952)	49·2 s.
100 metres	Alan Ford (U.S.A., 1948)	55·4 s.
200 metres	J. B. Marshall (Australia 1950)	2 m. 4·6 s.
1 mile	J. J. Davies (Aust., 1953)	22 m. 51·6 s.

Breast Stroke		
100 yds. ..	K. E. Carter (U.S. 1949)	58·5 s.
100 metres ..	G. Minaschkin (Russia, 1953)	1 m. 11·2 s.
200 metres ..	Knud Gleie (Denmark, 1953)	2 m. 37·4 s.
200 yds. ..	Davies (Australia, 1952)	2 m. 12·9 s.
400 metres ..	Bob Bonte (Holland, 1948)	5 m. 40·2 s.
500 metres ..	Bob Bonte (Holland, 1948)	7 m. 10·1.
Butterfly		
100 metres ..	G. Tumpek (Hungary, 1953	1 m. 4·3 s.
Back Stroke		
100 yds. ..	Y. Oyakawa (U.S.A., 1953)	56·1 s.
100 metres ..	G. Boson (France, 1952)	1 m. 3·3 s.
200 metres ..	G. Boson (France, 1953)	2 m. 18·3 s.

WOMEN'S WORLD TRACK AND FIELD RECORDS

100 yds. run ..	Marjorie Jackson (Australia, 1950)	10·7 s. (1950)
220 yds. ..	F. B. Koen (Holland) ..	24·2 s. (1950)
100 metres run	H. Stephens (U.S.A.) ..	11·5 s. (1936)
Do. do. ..	F. B. Koen (Holland) ..	11·5 s. (1948)
800 metres ..	N. G. Pletneva (U.S.S.R.)	2 m. 12 s. (1951)
Broad Jump ..	F. B. Koen (Holland) ..	20 ft. 6 in. (1945)
Running High Jump ..	S. Lerwill (G.B.) ..	5 ft. 7¼ in. (1951)
Discus Throw	Nina Dumbadez (U.S.S.R.)	175 ft. 1 in. (1951)
Javelin Throw	N. V. Smirnitskaja (U.S.S.R.) ..	175 ft. 2¾ in. (1949)

WOMEN'S SWIMMING RECORDS

Free Style		
100 yds. ..	G. Andersen (Denmark)	58·2 s. (1949)
100 metres ..	W. Den Ouden (Holland)	1 m. 4·66 s. (1936)
Breast Stroke		
100 yds. ..	N. Van Vliet (Netherlands)	1 m. 9·2 s. (1947)
100 metres ..	E. Szekely (Hungary) ..	1 m. 16·9 s. (1951)
Back Stroke		
100 yds. ..	J. Wielema (Holland) ..	1 m. 4·6 s. (1950)
100 metres ..	Cor Kint (Holland) ..	1 m. 10·9 s. (1939)
200 metres ..	J. Wielema (Holland) ..	2 m. 35·3 s. (1950)

DAVIS CUP

(International Lawn tennis: Men's Team Event—Started in 1900)

1932 France
1933 Britain
1934 Britain
1935 Britain
1936 Britain
1937 U. S.
1938 U. S.
1939 Australia
1940-45 No Game.
1946 U. S.
1947 U. S.
1948 U. S.
1949 U. S.
1950 Australia
1951 Australia
1952 Australia
1953 Australia

WIGHTMAN CUP (WOMEN'S TEAM EVENT)

(Annual Competition by women lawn tennis players of Great Britain and U.S.A.—started in 1923)

1946 America
1947 America
1948 America
1949 America
1950 America
1951 America
1952 America
1953 America

WIMBLEDON TENNIS CHAMPIONSHIP, 1953

International lawn tennis tournament for individual championship held annually at Wimbledon, England)

Men's Singles—E. V. Seixas (U.S.) ; *Women's Singles*—Miss Maureen Connolly (U.S.) ; *Men's Doubles*—Ken Rosewall & Lewis Hoad (Australia) ; *Women's Doubles*—Miss Doris Hart & Miss Shirlay Fry (U.S.A.) ; *Mixed Doubles*—E. V. Seixas and Miss Doris Hart (U.S.).

MILE RUNNERS

1874 W. Slade (Eng.) 4m. 24·5s.
1882 W. George (Eng.) 4m. 21·4s.
1923 P. Nurmi (Swed.) 4m. 10·4s.
1931 J. Laudoumergue (France) 4m. 9·2s.
1933 J. Lovelock (U.S.) 4m. 7·6s.
1934 J. Cunningham (U.S.) 4m. 6·8s.
1935 Wooderson (Eng.) 4m. 6·4s.
1942 G. Haegg (Swed.) 4m. 4·6s.
1943 Anderson (Swed.) 4m. 1·6s.
1945 G. Haegg (Swed.) 4m. 1·4s.

WORLD CHESS CHAMPIONS

1851-58—Adolph Anderson (Ger.)
1958-62—Paul Morphy (U.S.A.)
1862-66—Adolph Anderson (Ger.)
1866-94—Wilhelm Steinitz (Aust.)
1894-1921—E. Lasker (Ger.)
1921-27—J. R. Capablanca (Cuba)
1927-35—A. A. Alekhine (Russia)
1935-37—Dr. M. Euwe (Holland)
1937-46—A. Alekhine (Russia)
1946-47—*Vacant.*
1948-53—M. Botwinnik (Russia)

BOXING CHAMPIONS

Heavy Weight (any weight) Rocky Marciano (U.S.)
Light-Heavy Weight (175 lbs.)—Archie Moore (U.S.)
Middle-Weight (160 lbs.)—Vacant
Welter Weight (147 lbs.)—Kid Gavilan (Cuba)
Light Weight (135 lbs.)—Lauro Salas (Mexico)
Feather Weight (126 lbs.)—Sandy Saddler (U.S.A.)
Bantam Weight (118 lbs.)—Jimmy Carruthers (Australia)
Fly Weight (112 lbs.)—Yoshio Shirai (Japan)

MODERN HEAVY-WEIGHT CHAMPIONS

John L. Sulivan (1882-92)
James J. Corbett (1892-97)
Robert Fitzsimons (1897-99)
James J. Jeffries (1899-1906)
Tommy Burns (1906-08)
Jack Johnson (1908-15)

Jess Willard (1915-18)
Jack Dempsey (1919-26)
Gene Tunney (1926-28)
Max Schmeling (1930-31)
Jack Sharkey (1932)
Primo Carnera (1933)
Max Baer (1934)
James J. Braddock (1935-36)
Joe Louis (1937-49)
Ezzard Charles (1949)
Joe Walcott (1951)
Rocky Marciano (1952)

WORLD TABLE TENNIS

Swaythling Cup—*Men's Team Event*

1926-27—1930-31	Hungary	1946-47 ..	Czechoslovakia
1931-32 ..	Czechoslovakia	1947-48 ..	do
1932-33—1934-35	Hungary	1948-49 ..	Hungary
1935-36 ..	Austria	1949-50 ..	Czechoslovakia
1936-37 ..	U.S.A.	1950-51 ..	do
1937-38 ..	Hungary	1951-52 ..	Hungary
1938-39 ..	Czechoslovakia	1952-53 ..	England
1939-46 ..	*No competition*		

Coribillon Cup—*Women'e Team Event*

1933-34 ..	Germany	1946-47 ..	England
1934-35 ..	Czechoslovakia	1947-48 ..	do
1935-36 ..	do	1948-49 ..	U.S.A.
1936-37 ..	U.S.A.	1949-50 ..	Rumania
1937-38 ..	Czechoslovakia	1950-51 ..	do
1938-39 ..	Germany	1951-52 ..	Japan.
1939-46 ..	*No competition*	1952-53 ..	Rumania

St. Bride Vas—*Men's Singles*

1937-38—R. Bergmann (*Austria*)
1938-39—R. Vana (*Czechoslovakia*)
1939-40—R. Bergmann (*Austria*)
1940-46—*No competition*
1946-47—B. Vana (*Czechoslovakia*)
1947-48—R. Bergmann (*England*)
1948-49—J. Leach (*England*)
1949-50—R. Bergmann (*England*)
1950-51—J. Leach (*England*)
1951-52—H. Satoh (*Japan*)
1952-53—F. Sido (*Hungary*)

Gasper-Geist Prize—*Women's Singles*

1950-51—Angelica Rosenau (*Rumania*)
1951-52—Angelica Rosenau (*Rumania*)
1952-53— do do

WORLD FOOTBALL CUP

(Jules Rimet Cup)

(*Played every fourth year—started in 1930*)

1930—Uruguay
1934—Italy
1938—Italy
1950—Uruguay

ASIAN FOOTBALL QUADRANGULAR TOURNAMENT

(India, Pakistan, Burma and Ceylon)

1952—India & Pakistan (*Joint holders*
1953—India

WORLD SKATING

1950-51—R. Button (*U.S.A.*)

THOMAS CUP

(*International Badminton Championship*)

1949—Malaya
1952—Malaya

OLYMPIC RECORDS

MENS

100 metres—H. Dillard (U.S.), 1948, 10·3 s.

200 metres—A. W. Stanfield (U.S.), 1952, 20·7 s.
J. C. Owens (U.S.) and A. Stanfield (U.S.) 1952, 1936, 20·7 s.

400 metres—V. G. Rhoden (Jamaica), 1952, 45·9 s.

800 metres—M. G. Whitfield (U.S.), 1952, **1 m. 49·2 s.**

1,500 metres—J. Barthel (Luxemburg), 1952, 3 m. 45·2 s.

5,000 metres—E. Zatopek (Czechoslovakia), 1952, 14 m. 6·6 s.

10,000 metres—E. Zatopek (Czechoslovakia), 1952, 29 m. 17 s.

Marathon—E. Zatopek (Czechoslovakia), 1952, 2 hr. 23 m. 3·2 s.

1600 M. Relay(4×400)—Jamaica, 1952, 3 m. 3·9 s.

10,000 M. Walk—J. F. Mikaelsson (Sweden), 1952, 45 m. 2·8 s.

50,000 M. Road Walk—J. Dordani (Italy), 1952, 4 hr. 28 m. 7·8 s.

110 M. Hurdles—H. Dillard (U.S.), 1952, 13·7 s.

400 M. Hurdles—C. H. Moore (U.S.), 1952, 50·8 s.

3,000 M. Steeplechase—H. Ashenfelter (U.S.), 1952, 8 m. 45·4 s.

High Jump—W. Davis (U.S.), 1952, 6 ft. 8⅜ in.

Long Jump—J. Owens (U.S.), 1936, 26 ft. 5 5/6 in.

Pole Vault—R. E. Richards (U.S.), 1952, 14 ft. 11⅛ in.

Hop, Step & Jump—A. F. DA Silva (Brazil), 1952, 53 gt. 2½ in.

Discus—S. Innes (U.S.), 1952, 180 ft. 6½ in.

Hammer—J. Csermak (Hung.) 1952, 197 ft. 11⅝ in.

Javelin—C. Young (U.S.), 1952, 242 ft. 0¾ in.

Decathlon—R. B. Mathias (U.S.) 1952, 7,887 pts.

WOMEN'S

100 metres—M. Jackson (Aust.), 1952, 11·5 s.
—H. H. Stephens (U.S.), 1936, 11·5 s.

200 metres—M. Jackson (Aust.), 1952 23·7 s.

8 metres hurdles—S. Strickland (Australia), 1952, 10·9 s.

High jump—A. Coachman (u.s.) 1948, 5 ft. 6⅛ in.

Long jump—Y. Williams (N.Z.), 1952, 20 ft. 5¾ in.

Weight—G. Zybina (U.S.S.R.), 1952, 50 ft. 1½ in.

Discus—N. Romaschkova (U.S.S.R.), 1952, 168 ft. 8⅜ in.

Javelin—D. Zatopkova (Czech.), 1952, 165 ft. 7 in.

Association Football

1952 .. .. Hungary

Basket-Ball

1952 .. .. U.S.

Water-Polo

1952 .. .. Hungary

OLYMPIC HOCKEY CHAMPIONS

1908	Great Britain	1928	India	1936	India
1920	Great Britain	1932	India	1952	India

SOME NOTABLE RECORDS

World Motor-boat Record—Stanley S. Sayres (U.S.A.)—160·325 m.p.h. 26 June, 1950. *Previous record*—Sir Malcolm Campbell (Eng.)—141·74 m.p.h., 19th August, 1939.

World Air Speed Record—670·9 m.p.h., by Major Richard L. Johnson (U.S.A.), Sept. 15, 1948.

Motor Cycle Record—Wilhelm Herz—290 km. P.H. or m.p.h., Ap. 12, 1951. *One hour*—Taruff (Italy)—127·537 m.p.h., 1939.

Deep-Sea Diving Record—Swiss explorer Auguste Piccard reached the record depth of 10,335 feet (3,150 metres) into the Mediterranian with his bathyscape on 30th September, 1953.

Motor Speed Record—*Large Car*: *One mile*—John Cobb (England 394·196 m.p.h. (1947); *24 hours*—Eyston (England), 3578·3 miles; *Small car*: Kohlrausch—140·7 miles m.p.h.

Speed Skating

500 metres—S. Natto (Japan), 43s. (1951).

1,500 metres—Van der Voort (Holland), 2m. 17·7s (1951).

World Championship—H. Andersen (Norway), 200·147 points (1951).

Figure Skating World Champions. 1951 Men—R. T. Button (U.S.).

Ladies—J. Altwegg (Eng.).

Pairs—Ria Baran & P. Falk (Germany).

Dance—Jean Wesword & L. Demmy (England).

MISCELLANEOUS RECORDS

Golf Ball—176 ft. per second.

Tennis Ball—220 ft. in one second by W. T. Tilden II in 1931.

Ice Skating—100 yds. in 92·5 seconds in 1931.

Rifle—2,880 miles per hour (*i.e.*, 4,100 ft. per second).

Sound—780 miles per hour.

Leaping—Frog: 19 ft. in 1937 in America in frog contest with 100 frogs.

Horse: 37 ft. by steeple chaser, Chandler, 1947 in England (Average is 23 and 27 ft.).

Diving—Jack Brown, April 28, 1945 attained a depth of 550 ft.

Diving, highest—205 ft. 9 in. by Alex. Wickham (Solomon Islands).

Mountain Climbing—29,002 ft. highest known ascent on Mt. Everest by Sir Edmund Hillary and Sherpa Tenzing Norkey, 1952.

Rope Skipping—18,463 turns (no break) in 1 hour 41 minutes by Tom Morris (Australia).

Cricket Ball Throw—422 ft. by R. Parcival, Durham, England, 1884.

AVIATION

HISTORY OF FLYING

	Date
Leonardo da Vinci invented his flying machine	1500
First flight made in a balloon by Pilatre de Rozier	1783
first power-driven model plane flown successfully	1848
Wright brothers' first airoplane flight	1903
First Zeppelin airship built	1908
Bleriot makes Channel crossing	1909
L. Paulhan flew from London to Manchester (186 miles) with only one stop	1910
G. H. Curtis (U.S.) made the first flight rising from water in a hydroplane	1911
First Zeppelin raid on London	1915
First non-stop transatlantic flight by Alcock & Brown	1919
First Autogyro flight by Jnan de la Cierva (*Spain*), June 9	1923
Sir Allan Cobham flew from England to Australia and back	1926
First woman's solo flight, Amy Johnson flew from England to Australia	1930
Amelia Earhart flew solo from Harbour Grace to Londonderry	1932
Wiley Post (U.S.)—first solo flight round the world (15,596 miles in 7 days, 18 hrs. 49½ min.)	1933
Altitude of over 13½ miles reached in balloon by Stevens and Anderson (U.S.A.)	1935
U.S.S.R. flyers made the longest non-stop flight of 6,700 miles from Moscow over North Pole to California	1937
Jet propulsion principle	1940
Flying bombs used against Britain	1944
World speed record 623·8 m.p.h. set up by Lockheed "shooting star"	1947

Aeroplane Altitude Records

Height (feet)	*Year.*	*Aviator.*
41,795	1929	W. Neuenhofen (Germany).
43,166	1930	A. Soucek (U.S.A.).
43,976	1932	C. F. Unwins (England).
47,352	1934	R. Donati (Italy).
47,806	1935	V. Kokkinaki (U.S.S.R.).
49,994	1936	S. R. D. Swain (England).
53.937	1937	Fl. Lt. Adam (England).
56,046	**1938**	**Mario Pazzi (Italy).**
59,445*	1948	J. Cunningham (England).

* Jet propelled aircraft

Endurance Flight Record

Hr.	*Min.*	*Year.*	*Aviator.*
150	40	1929	Carl Spatz (U.S.A.).

172	32	1929	..	Robbins & Kelly (U.S.A.).
246	43	1929	..	Mendell & Reinhart (U.S.A.).
553	41	1930	..	J. & K. Hunter (U.S.A.).
647	28	1930	..	Jackson & O'Brine (U.S.A.).
653	34	1935	..	Al & Fred Key (U.S.A.).
008	1	1949	..	W. Barris & R. Riedel (U.S.A.).
1008				

Speed Records—Land planes

m.p.h.	*Year*	*Aviator*
30	1903	O. Wright (U.S.A.)
120·9	1919	Alcock & Brown
294·38	1932	J. Doolittle (U.S.A.)
304·38	1933	J. Wedell (U.S.A.)
469·22	1939	F. Wendel (Ger.)
606	1945	H. J. Wilson (Eng.)
650·6	1947	Marion Carl (U.S.)
670·9	1948	R. L. Johnson (U.S.A.)
753·4	1953	Lt.-Com. James (U.S.A.)

Speed Records—Sea planes

m.p.h.	*Year*	*Aviator*
340·08	1931	J. H. Boothman (Eng.)
406·99	1931	G. H. Stainforth (Eng.)
440·68	1934	F. Agello (Italy)

Non-stop Record

Year.	*Distance (miles)*	*Aviator.*	*Flown.*
1919	1,960	Alcock & Brown (Eng.)	New Foundland to Iceland.
1923	2,560	Macready & Kelly (U.S.A.)	N. Y. to California.
1927	3,610	C. L. Lindburgh (U.S.A.)	New York to Paris.
1927	3,905	C. Chamberlain & C. Levine (U.S.A.)	New York to Germany.
1928	4,466	A. Ferrarine & C. P. Prete (Italy)	Rome to Touros (Brazil).
1930	4,912	D. Coste & M. Bellonte (France)	France to Manchuria.
1933	5,411	Gayford and Nicholetts (Eng.)	Cornwall to S. Africa.
1933	5,657	P. Codes & M. Rossi (Fr.)	New York to Syria.
1945	8,198	Irvine & Stanley (U.S.A.)	Guam to Washington
1946	11,236	Comdr. Davies & U. S. Navy Crew (U.S.A.)	Australia to Colombo.

Aeroplanes

First Aeroplane Flight—World's first controlled flight in power-driven aeroplane by Orville Wright, 284 yds. on December 17, 1903.

Greatest Speed—(1) St.-Commander Lithgow (England)—737·3 miles per hour on 25-9-53 (2) Neville Duke (Eng.)—727·6 miles per hour on 2-9-53, (3) Lt. Com. James (U.S.A.)—753·4 miles per hour on 3-10-53.

First polar Flight—By Cmdr Byard (May 8-9, 1926).

First Solo Polar Flight—over North Pole by Capt. Charles F. Blair (U.S.A.), May 29, 1951.

Around the World—U. S. Air Force B-50 bomber '*Lucky Lady II*' (nonstop refuelled in the air) 23,452 miles in 94 hours.

Distance—11,235 miles by T. D. Davis, E. P. Rankin, W. S. Reid and R. A. Tabeling (U.S.A.) on Sept. 29—Oct. 1, 1946.

Endurance Flight Record—Bob. Wordehouse and W. Jongeward (America) new for 1,114 hours and 18 minutes *i.e.* over 46 days (1949).

First Non-stop Trans-Atlantic Flight—By Captain Alcock and Lt. Brown (June 15-16, 1919) in 16 hours. 12 minutes.

First Solo Trans-Atlantic Flight—By Lindburgh (May 20-21, 1927) in 36 hours 39 minutes.

High Altitude—Wing- Commander Walter Gibb (Eng.)—63,668 ft. (1953).

Seaplanes

Distance Air Line—Capt. Bennet and F. O. Harvey (Great Britain) 6-8 October, 1938 ; Dundee to Port Nolloth (South Africa)—5,997·462 miles) 965·001 kilometres.

Distance Over Closed Circuit—M. Stoppani and C. Tonini : Italy, 27-28 May, 1937—3,231·123 miles (5,200 kilometres).

Greatest Speed—Francesco Agelo Italy, 23rd October, 1936—440·681 miles per hour.

Solo Flight around the World—Capt. Odom (America) set world record of solo flight round the World in 73 hrs. 6 mins. (19,645 miles) in 1947.

Balloons

Altitude—Capt. Anderson and Capt. Stevens (U.S.A.)—72,395 feet (over 13½ miles) on Nov. 11, 1935.

Duration—H. Kaulen, 13-17th December, 1912—87 hours.

Air Ship

Long Distance—Germany to Tokio, 15-19th August, 1929, Graf Zeppelin—7,500 miles.

Gliders

Duration—Guy Merchand (France), March 16-18, 1949—40 hours 51 mins.

Distance Straight Line—R. H. Johnson (U.S.), Aug. 5, 1951—535·169 miles.

Altitude—William S. Ivans (U.S.), Dec. 30, 1950—30,000 ft.

Parachute

Descent—Rene Michenaud (1932, France) jumped from an aeroplane at an altitude of 25,590 ft. in France.

Delayed Parachute jump—Vlentina Seliverstova (Russia) jumped from 23,295 ft. and did not open her parachute until she had fallen 20,777 ft. (1951).

Jet Planes

Speed Record—Major W. Bridgeman (U.S.A.) in Navy 'Skyrocket' jet plane reached 1,238 m.p.h. (twice the record of sound) and altitude 79,494 ft. 1952.

Women's Flight Records

Distance Air Line—V. Grisodoubova and P. Ossipenko, U.S.S.R., September 24-25, 1938—3,671·432 miles.

Altitude—Mile Hilz (France)—46,948·725 ft. on June 23, 1936.

Speed—J. Cochran (U.S.A.)—412·002 on Dec. 17, 1947.

First Woman Trans-Atlantic Solo Flight—Mrs. Amelia Earhart Putnam (U.S.A.), approximately in 13 hrs. 30 mins., on May 20-21, 1932.

Helicopter

Distance Airline—Maj. Caschman and Maj. Zins (U.S.A.)—703·6 miles on May 22, 1946.

Altitude—Capt. H. D. Gaddis (U.S.A.)—21,220 ft. on May 21, 1949.

Distance, closed circuit—Maj. D. H. Jenson and Maj. W. C. Dodds (U.S.A.)—621·369 miles, Nov. 14, 1946.

Maximum Speed—H. E. Thomson (U.S.A.)—129·552 m.p.h. Apl. 27, 1949.

Speed, close circuit (1,000 k.m.)—Maj. D. H. Jensen and Maj. W. C. Dodds (U.S.A.)—107·251 m.p.h. on Nov. 14, 1946.

INDIAN PRESS

The Indian journalism had its first beginning when James Augustus Hicky started his *Bengal Gazette* on January 29, 1780 at Serampore near Calcutta. The first journals published in this country were started in Bengal. At that time, newspapers were started mostly for the benefit of the British in India. Hicky's venture was followed by a number of others in quick succession. The most significant of these was the *John Bull in the East* in 1821 which was subsequently changed into the *Englishman.*

The development of the Indian press i.e. National Press was conditioned by the political stimulus that gave rise to it but it has been one long history of trials and tribulations. Indian Press had to struggle against several statutory disabilities. The conflict began with the notorious *Vernacular Press Act 1878* continued unabated. Other more drastic measures followed such as Newspapers Incitement to Indian States Act of 1922, Official Secrets Act of 1923, Indian Press (Emergency Powers) Act of 1931, Foreign Regulations Act of 1932, Indian States (Protection) Act of 1934, etc. etc.

With the attainment of freedom, a new era of public responsibility dawned upon the Indian Press. The disappearance of the antognism between the people and the rulers opened a new chapter in the relationship between the Government and the Press. The supreme duty of the press now is to educate and mould public opinion in favour of peace and harmony among the various communities in the country.

On a persistant demand from the Indian Press, the Government appointed a *Press Laws Enquiry Committee* in March 1947 to enquire into the press laws and recommend necessary changes in them. The Committee submitted its report in May, 1948. Among its recommendations were the repeal of certain laws like Indian Press (Emergency Powers) Act of 1931 and the States (Protection) Act of 1934 and the modification of others. At the same time, the Committee recommended that State Governments should make the widest possible use of the press consultive machinary and avoid any action against newspapers except after consultation with the Local Press Advisory Committee.

FREEDOM OF THE PRESS—The Indian Constitution contains important Articles on the Fundamental Rights of citizens. Foremost among these fundamental rights is the right to "freedom of speech and expression."

Unlike American and some other constitutions in which freedom of the press is mentioned in terms as one of the fundamental freedoms of the citizens guaranteed by the constitution, the Indian constitution does not specifically mention freedom of the press ; the fundamental rights clause of the Indian Constitution treats freedom of the press as an aspect of the larger "freedom of expression."

After the enactment of the constitution various press laws were challenged before the courts and some of them were held invalid. In many cases, the courts declared the relevant provisions of the press laws *ultra vires*, thus creating a void in the sphere of legislation to the press.

On May 12, 1951, the Prime Minister introduced an amendment to the Constitution which sought to widen the restrictions on the freedom of speech and expression. Under the old Article 19 (2) the limitations were (1) libel, slander and defamation (2) contempt of court (3) decency and morality and security of the State. The amended Article reads :—"Nothing in sub-clause (a) of clause (1) shall affect the operation of any existing law, or prevent the State from making any law, in so far as such law imposes reasonable restrictions on the exercise of the right conferred by the said subclause in the interests of the security of the State, friendly relations with foreign States, public order or morality, or in relation to contempt of court, defamation or incitement to an offence". Thus, three more reservations were added, namely, (1) friendly relations with foreign states (2) public order and (3) incitement to an offence. The amended Article also permitted the old Press laws to continue.

THE PRESS (OBJECTIONABLE MATTER) ACT OF 1951—came into force on 1st Feb. 1, 1952. The Act abolished pre-censorship and provided against the arbitrary demand of security. Another feature of the Act was that the demand of security or its forfeiture could not be ordered by the executive but by a asessions judge. The right to appeal to the High Court had also been conceded. Provision was made for the return of the security if no further action was taken for a period of two years from the date of the deposit. The power of the Government to declare certain publications forfeited is also subject to the advice of the Advocate General or a principal Law Officer of the State or the Attorney General of India.

INDIAN NEWSPAPER CIRCULATION—On April 1, 1952, the number of newspapers in India was 6,762, out of which 596 were daily papers, 226 weeklies and 3,940 other periodicals. Of these, 70 dailies, 261 weeklies and 784 periodicals were published in English. The total circulation of daily papers in India has been estimated at a little over 20,00,000. This gives a ratio of roughly six copies for a thousand people against 596 in U.K., 354 in U.S.A., 224 in Japan.

NEW DEVELOPMENT—The most notable event in the Indian journalism in 1948 was the formation of the *Press Trust of India Ltd.*—an organisation to take over the supply of news to and from India. The Press Trust is a non-profit-making concern and its membership is open to newspapers in India. As a result of the successful negotiations with Reuters, the Indian Press has gained full control over its own internal news supply.

It is encouraging to note, on the production side, get-up, display, news coverage and other technical details have made progress and can now compare favourably with England and America. Many newspapers are now expanding and modernising their technical equipment. Another interesting development is the distribution of papers by air to centres which could be reached more quickly by plane.

Further important development in the Indian journalism is the growth of chain newspapers with tendency to create monopolies. The growth is being viewed with some amount of suspicion rather than with favour. That are obvious dangers arising out of the control of a number of newspapers by a person or a group of persons where a few can afford to dictate the news and views at their command. The concentration of control in the hands of few magnates is liable to make the working journalists mere mouth-pieces of their masters.

Another happy growth is the movement on the part of journalists to improve their economic and professional conditions through the starting of Journalist Associations and Press Clubs.

It is also gratifying that many features of journalistically advanced countries are being gradually introduced in this country, such as literary typewriting bureaus, literary agents, press-cutting companies and translation bureaus. The scope of free-lance writer has broadened to a considerable extent.

Another important advancement is the establishment of *Indian Audit Bureau of Circulations*, whose creation provides an impartial and authentic agency for auditing and circulation of newspapers as prevalent in U.S.A. and England.

UNIVERSITY COURSE IN JOURNALISM—Several universities of India have taken up the question of teaching of journalism. Madras University is the only University in India Union which first opened a course of journalism. University of Calcutta has also started journalism class with two-year diploma course from 1950. There is also course of journalism in Nagpur University.

INDIAN NEWS AGENCIES—So far as the Indian news is cocerned, *Associated Press of India* started by the late Mr. K. C. Roy was the pioneer in the field. Afterwards it became a Reuter-subsidiary company. But in August 1947 Indian and Eastern Newspaper Society and Reuter came to a settlement by which a successor news agency was formed called *Press Trust of India* in place of Associated Press of India which now runs as a national news agency. The Press Trust of India entered Reuter's world set up as a partner paying for its qualifying shares with a seat on Reuter's Board and a voice in its organisational control. P.T.I. is represented in Reuters by a Trustee and a Director and is a party to the Reuter Trust. P.T.I. is a public non-profit-sharing company.

United Press of India is an important Indian News Agency which was started on September 1, 1933. It has now 20 offices including one each in London, New York, Rangoon, Colombo and large number of subscribers. It has net-work of corespondents all over the country. It has also established teleprinter connection between Delhi-Bombay-Calcutta and other news centres.

Near and Far East News (Asia) was started on April, 31, 1952. NAFEN issues news bullatins in English and almost all Indian languages from its four centres.

Another imortant news agency is *Dhiman Press of India* started in 1935 which has its head-quarters in Ludhiana. It supplies news, newsphotos and features from all over the world to more than 100 dailies and weeklies in India. Another newly-started news agency is the *Hindustan Samachar Ltd.*, which commenced its work in 1948. Agency now supplies news reports in English, Hindi, Marathi and Gujerati.

Free Press of India was founded in 1923 but was suspended in 1935. The Agency has again commenced business in 1945. But its news service is mainly confined to Free Press group of papers at Bombay.

Foreign Agencies—The Foreign News Agencies comprise—*Reuters*, *Associated Press of America*, *Agence France Pressee*, *Tass News Agency* and *Central News Agency*. Some Foreign News Agencies supply world news to Indian papers and send Indian news to their clients abroad. In addition to those, there are press correspondents for individual papers.

PRESS COMMISSION—Government of India appointed a Press Commission on September 23, 1952, under the chairmanship of Mr. Justice Rajadhyaksha to enquire into the state of the Press in the country, its present and future lines of development and to examine (1) control, management and ownership and financial structure of newspapers, the periodical press, news agencies and feature syndicates, (2) working of monopolies and chains, (3) effect of holding companies, the distribution of advertisements etc., (4) method of recruitment, training, scales of remuneration etc. of working journalists, (5) adequacy of newsprint supplies, (6) machinery for ensuring high standards journalism, liaison between the Government and the Press, (7) the repeal and amendments of laws which are not in consonance with the right of freedom of the press.

PRESS & NEWSPAPERS ORGANISATIONS—There are at present three main bodies in India which seek to promote the welfare of Indian newspapers and better understanding and appreciation of each other's difficulties—(1) *Indian and Eastern Newspaper Society* started in February 1939, the objects of which are as follows: (*a*) to act a central organisation of the Press of India, Burma and Ceylon, (*b*) to promote and safeguard the business interests of members as affected by the action of Legislatures, Governments, the Law Courts, municipal and local bodies and associations or organisations, etc., (*c*) to collect information upon all topics having a practical interest for members and to communicate the same to them, (*d*) to promote co-operation in all matters affecting the common interests of members, (*e*) to hold periodical conferences of its members to discuss and determine action on matters of common interests, (*f*) to make rules to govern the conduct of its members in specified matters, to provide penalties for the infringement thereof, and to provide means of determining whether there has been such infringement, (*g*) to maintain a permanent secretariat in India which should watch over the interests of members and should permit of a constant interchange of information and views, (*h*) to do all such other things as may be conductive to the attainment of the aforesaid objects.

(2) *All-India Newspaper Editors' Conference* was started in 1940. Its constitution is as follows : (*a*) to preserve the high traditions and standard of journalism, (*b*) to serve and safeguard the interests of the press in regard to the publication of news and fair comment, (*c*) to secure all facilities and privileges to the press for the due discharge of its responsibilities, (*d*) to represent the press in India in its relations with public and public institutions and particularly in its relations to government, to set up Committees who would act *liaison* between the government and the press as a whole, (*e*) to establish and develop contacts with Associations with similar objects in other countries.

Another Associations has also been started known as (3) *Indian Languages Newspapers' Association* (established in 1941) for the welfare of newspapers in Indian languages. It is the only organisation in India representing the interests of small newspapers, periodicals and magazines.

INFORMATION AND PUBLICITY OF THE CENTRAL AND STATE GOVERNMENTS—The Ministry of Information and Broadcasting is a separate Ministry. Under this Department, are the *Press Information Bureau, the Publications Division, the Films Division and the Advertising Branch,* etc.

There is not only Press Information Bureau under the Information Officers attached to each Central Ministries, Public Relations Officers, or Press Attaches attached to Indian Embassies and consular establishment abroad and Public Relations Officers for Railways and other governmental agencies. There are also Information Ministers in the States controlling information departments under Directors of Publicity.

The *Films Division of the Ministry* is the organisation for the production and distribution of documentary and publicity films and news reels. Documentaries and news reels produced by the Division are regularly exhibited in the cinema houses and are shown in rural areas through mobile vans.

Publications Division of the Government of India—The publications Division is responsible for the production, sale, and distribution of popular pamphlets, books, magazines on matters of national importance. The Division of the Government of India produces and distributes two English, three Hindi and one Urdu and one Arabic magazine and a large number of pamphlets in English and Hindi on subjects of national importance. The publications of this Division are meant for both internal and external publicity.

IMPORTANT INDIAN NEWSPAPERS

WEST BENGAL

Dailies

Statesman (*English*): Chowringhee Square, Calcutta.
Amrita Bazar Patrika (*Eng.*): 14, Ananda Chatterjee Lane, Calcutta.
Hindustan Standard (*English*) : 3-C, Burman Street, Calcutta.
Ananda Bazar Patrika (*Beng.*) : 1, Burman Street, Calcutta.
Basumati (*Bengali*) : 166, Bowbazar Street, Calcutta.
Jugantar (*Bengali*) : 2, Ananda Chatterjee Lane, Calcutta.
Lokmanya (*Hindi*) : 160, Harrison Road, Calcutta.
Rozana Hind (*Urdu*) :17, Sagor Dutta Lane, Calcutta.
Desh Darpan (*Punjabi*) : 82-A, Ashutosh Mukherjee Rd., Cal.
Loksevak (*Bengali*) : 86-A, Lower Circular Road, Calcutta.
Jana Sevak (*Bengali*): Congress daily organ.
Viswamittra (*Hindi*): 74, Dharmatola Street, Calcutta.

Periodicals

Basumati (*Bengali Monthly*) : 166, Bowbazar Street, Calcutta.
Bharatvarsa (*Bengali Monthly*): 203-1, Cornwallis St., Calcutta.
Prabasi (*Bengali Monthly*) : Upper Circular Road, Calcutta.
Betar Jagat (*Official Radio Bengali Fortnightly*): 1, Garstin Place, Calcutta.
Sachitra-Bharat (*Bengali Weekly*) : 110, Lower Circular Road, Calcutta.
Sanibarer Chitti (*Bengali Monthly*): 57, Indra Biswas Road, Calcutta.
Mahila (*Bengali Monthly*) : 123/1, Upper Circular Road, Calcutta.

Mauchak (*Children's Bengali Monthly*): 14, Bankim Chatterjee St., Calcutta—12.
Modern Review (*English Monthly*): Upper Circular Road, Calcutta.
Capital (*English Financial weekly*): 4, Lyons Range, Cal.
Desh (*Bengali Weekly*) : 1, Burman Street, Calcutta.
Dipali (*Bengali Weekly*): 123-1, Upper Circular Road, Calcutta.
Indian Finance (*English Financial Weekly*): 116, Lower Circular Road, Calcutta.
Hindustan Year-Book (*English Annual*): 14, Bankim Chatterjee St., Calcutta—12.

ASSAM

Dailies

Assam Tribune (*English*): Gauhati.
Nutan Assamiya (Assamese) : Uzanbazar, Gauhati.

Periodicals

Public Voice (*English Weekly*) : P.O. Rehabari, Dibrugarh.
Janasakti (*Bengali Weekly*) : Silchar.
Assam Review and Tea News (*Monthly*) : Calcutta.

BIHAR

Dailies

Indian Nation (*English*): Patna.
Evening News (*English*): Patna.
Searchlight (*English*): Patna.
Navarashtra (*Hindi*) : Rajendra Peth, Patna.
Aryavarta (*Hindi*) : Patna.
Pradeep (*Hindi*): Patna.
Rashtravani (*Hindi*) : Patna.
Sada-E-aam (*Urdu*) : Patna.

Periodicals

Behar Herald (*English Weekly*): Patna.
Navashakti (*Hindi Weekly*): Patna-Gaya Road, Patna.
Jyotsna (*Hindi Monthly*): Patna.
Spark (*English Weekly*) : Kadam Kuan, Patna.
Azad Hind (*Hindi Weekly*): Machchea Toli, Patna.
Hunkar (*Hindi Weekly*): Bankipur, Patna.
Jharkand News (*Hindi & Mundari Weekly*) : Ranchi.
Kahaniya (*Hindi Monthly*) : Patna 3.
Nadeem (*Urdu Monthly*): Subzibagh, Patna.
Hindustan Review (*English Monthly*) : Patna.

BOMBAY

Dailies

Times of India (*English*): Hornby Road, Bombay.
National Standard (*English*) : P.O. Box 867, Bombay.
Bombay Chronicle (*English*): Elphinstone Circle, Fort.
Evening News of India (*English*) : Hornby Road, Bombay.
Free Press Journal (*English*) : 21, Dalal Street, Fort.
Free Press Bulletin : 2, Dalal Street.
Bharat (*English*) : 341, Tardeo.
Bombay Sentinel (*English*) : Elphinstone Circle, Fort.
Poona Daily News (*English*) : 358, Narayan Peth, Poona 2.
Bombay Samachar (*Gujarati*) : Parsi Bazar Street, Fort.
Dhyan Prakash (*Marathi*): Deccan Gymkhana, Poona.
Jame-e-Jamshed (*Gujarati*): Mangalore Street, Fort.
Janmabhhomi (*Gujarati*) : Ghoga Street, Bombay.
Lokamanya (*Marathi*) : Ghoga St., Bombay.
Aftab Daily (*Urdu*) : Mastan Tank Cross Lane, Bombay 8.
Daily Kal (*Marathi*) : 200/3, Sadasiv Peth, Poona 2.
Dinik Bharat (*Marathi*) : 27, Budhwar Peth, Poona 2.

Gavakari (*Marathi*) : Agra Road, Nasik.
Lokasatta (*Marathi*) : Sassoon Dock, Colaba, Bombay.
Navakal (*Marathi*) : 13, Shenivadi, Girgaon, Bombay.
Navabharat Times (*Hindi*) : Hornby Road.
Navasakti (*Marathi*) : 21, Dalal Street, Bombay.
Samyukta Karnataka (*Kannada*) : Koppikar Road, Hubli.
Sandesh (*Gujarati*): Ahmedabad.
Sandhyakal (*Marathi*) : 13, Sheniwadi, Bombay.
Sakal (*Marathi*) : Poona.
Nava Yug (*Kannada*) : Hubli, Karnatak.
Vishwamitra (*Hindi*) : Nobel Chambers, Parsi Bazar Street.
Hindustan (*Gujarati*) : 341, Tardeo, Bombay.
Navabharat (*Marathi*) : 341, Tardeo, Bombay.
Vande Mataram (*Gujarati*) : Frere Road, Fort, Bombay.

Periodicals

Bharat Jyoti (*English Weekly*): 21, Dalal Street.
Current (*English Weekly*) : 15, Cawasji Patel Street.
Crossroads (*English Weekly*) : Bombay.
Atom (*English Weekly*) : Taj Building, Hornby Road.
March (*English Weekly*): Parsi Bazar St., Bombay.
Blitz (*English Weekly*) : Apollo Street, Fort, Bombay.
Bombay Chronicle (*Weekly*) : Elphinstone Circle, Bombay.
Filmfare (*Weekly*) : Bombay.
Screen (*Cinema Weekly*) : Bombay.
India (*English Pictorial Weekly*) : 6, Tulloch Road, Apollo Bunder, Bombay.
Struggle (*English Weekly*) : 208, Vincent Road, Bombay.
Eve's Weekly (*English*) : Taj Building, Hornby Road, Fort.
Commerce (*English Commercial Weekly*) : Churchgate Street.
Filmindia (*English Monthly*) : 55, Phirozsah Road.
Aryan Path (*English Monthly*): Raopura, Baroda.
Onlooker (*English Monthly*) : Sir P. M. Road, Bombay.
Roshni (*English Monthly*) : Foreshore Road, Bombay.
Sound (*English Monthly*) : Sir P. M. Road, Bombay.
Forum (*English Weekly*) : Apollo Street, Fort.
Sunday Standard (*English Weekly*) : Sassoon Dock, Colaba, Bombay.
Illustrated Weekly of India : Hornby Road, Bombay.
Janata (*English Weekly*) : 6, Tulloch Road, Bombay.
Labour Gazette (*English Weekly*) : Labour Office, Secretariat Fort.
Maharatta (*English Weekly*) : 568, Narayan Peth, Poona.
Harijan (*English Weekly*): Ahmedabad.
Karmaveer (*Kannada Weekly*): Kappikar Road, Hubli.
Kesari (*Marathi Bi-weekly*): 568, Narayan Peth, Poona.
Pravasi (*Gujarati Weekly*): Medows St., Fort, Bombay.

MADRAS

Dailies

Hindu (*English*) : Mount Road, Madras.
Indian Express (*English*) : Mount Road, Madras.
Mail (*English*) : Mount Rd., Madras.
Indian Republic (*English*) : 38, Mount Road, Madras.
Andhra Prava (*Telegu*) : Mount Road, Madras.
Andhra Patrika (*Telegu*) : G. T. Madras.

Dhinamani (*Tamil*); Mount Rd., Madras.
Bharat Devi (*Tamil*) : 2-16, Mount Road, Madras.
Janmabhoomi (*Telegu*) : Bijayawada.
Dinasari (*Tamil*) : Park Town, Madras.
Mathrubhumi (*Malayalam*): Calicut.
Swadesamitran (*Tamil*) : Mount Road, Madras.

Periodicals

Sport & Pastime (*English Weekly*): Mount Road, Madras.
Kaliki (*Tamil Weekly*): Kilpauk, Madras.
Ananda Vikatan (*Tamil Weekly*): Madras.
Kalaimangal (*Tamil Monthly*): Madras.
Andhra Jyoti (*Telegu Monthly*): Madras.
Bharati (*Telegu Monthly*) : 6 & 7, Thumbu Chetty Street, Mad.
Andhra Patrika illustrated weekly (*Telegu*): G. T. Madras.
Swadeshamitran (*Tamil weekly*): G. T. Madras.
Tamil Mani (*Tamil weekly*): G. T. Madras.
Indian Review (*English Monthly*): Madras.
Free India (*English Weekly*): 32,General Patters St., Madras.
Sunday Times (*English Weekly*): 69, Peter's Road, Madras.
My Magazine (*fortnightly English*): 32, Broadway, Madras.

MADHYA PRADESH

Dailies

Hitavada (*English*): Wardha Rd., Nagpur.
Nagpur Times (*English*): Nagpur.
Maharashtra (*Marathi*): Nagpur.
Jai Hind (*Hindi*): Gopal Bagh, Jabbalpur.
Lokmat (*Hindi*): Nagpur.
Nababharat (*Hindi*): Nagpur and Jabalpur.
Tarun Bharat (*Marathi*): Nagpur.
Hindi Swarajya (*Hindi Weekly*): Khandwa.
Karma Vir (*Hindi Weekly*): Khandwa.
Mahakoshal (*Hindi Weekly*): Raipur.

Periodicals

All-India Reporter (*English Law Monthly*): Nagpur.

ORISSA

Dailies

Eastern Times (*English*): Cuttack.
Matrubhumi (*Oriya*): Cuttack.
Samaj (*Oriya*): Cuttack.
Prajatantra (*Oriya*).

DELHI

Dailies

Hindustan Times (*English*): Connaught Circus, New Delhi.
Hindustan Times Evening News (*English*): Connaught Circus.
Statesman (*English*): Delhi.
Hindusthan Standard (*English*).
Times of India (*English*): 10, Darayaganj, Delhi.
Indian News Chronicle (*English*): 46, Mori Gate, Delhi.
Daily Pratap (*Urdu*): 19, Punch Kuin Road, New Delhi.
Milap (*Urdu*): New Delhi.
Watan (*Urdu*): Delhi.
Tej (*Urdu*) : Post Box 112, Delhi.
Daily Hind (*Urdu*): Delhi.
Hindustan (*Hindi Daily*): 40, Connaught Circus, New Delhi.
Nababharat Times (*Hindi Daily*): 10, Daryaganj, Delhi.

Periodicals

Caravan (*English Monthly*): New Delhi.

Eastern Economist (*English Weekly*): 52, Queensway, New Delhi.
Indian Listener (*English Radio Fortnightly*): 52, Queensway, New Delhi.
Shama (*Urdu Monthly*): Delhi.
Riyaset (*Urdu Weekly*): Delhi.
Vir Arjun (*Hindi Weekly*): Delhi.
Shankar's Weekly (*English*): Odeon Buildings, New Delhi.
Thought (*English Weekly*): 32, Faiz Bazar, Delhi.
Vigil (*English Weekly*):6, Jantar Mantar Rd., New Delhi.

UTTAR PRADESH

Dailies

Amrita Bazar Patrika (*English*): 15, Elgin Road, Allahabad.
Amrit Patrika (*Hindi*) : 15, Elgin Road, Allahabad.
Leader (*English*): Allahabad.
National Herald (*English*) : Lucknow.
Pioneer (*English*): Lucknow.
Telegraph (*English*): Kanpur.
Pratap (*Hindi*): Kanpur.
Sainik (*Hindi*) : Agra.
Sansar (*Hindi*): Banaras.
Banaras (*Hindi*): Banaras.
Aj (*Hindi*): Banaras.
Navajivan (*Hindi*): Lucknow.
Quami-Awaz (*Urdu*): Lucknow.
Bharat (*Hindi*): Leader Building Allahabad.
Jagaran (*Hindi*): Kanpur and Allahabad.
Swatantra Bharat (*Hindi*): Lucknow.
Sandesh (*Hindi Daily*): Agra.
Ujala (*Hindusthani Daily*): Agra and Delhi.

Periodicals

Hans (*Hindi Monthly*): Banaras.
Manorama (*Hindi Monthly*): Allahabad.
Saraswati (*Hindi Monthly*): Allahabad.
Abhyudaya (*Hindi Weekly*): Allahabad.
Maya (*Hindi Monthly*): 164, Muthiaganj, Allahabad.

PUNJAB

Dailies

Tribune (*Eng.*) : Ambala Cantt.
Ajit (*Urdu*) : Amritsar Delhi.
Akali Patrika (*Punjab*): Amritsar and Jullundar.
Prabhat (*Urdu*): Jullundar.
Khalsa-Sevak (*Punjabi*): Amritsar.

TRAVANCORE-COCHIN

Dailies

Deenabandhu (*Malayalam Daily*): Ernakulam.
Deepam (*Malayalam Daily*): Ernakulam.

MYSORE

Dailies

Daily News (*English*): 16, Hardinge Road, Bangalore.
Deccan Herald (*English*): 16, Mahatma Gandhi Road, Bangalore.

HYDERABAD

Dailies

Deccan Chronicle (*English*): Secundrabad.
Daily News (*English*): Secundrabad.

PRESS ASSOCIATION

Bombay Union of Journalists, Bombay.
Ind. Journalists Association, Cal.
South Indian Journalists' Federation, Sri Rama Buildings, 5-6, Mount Road, Madras-2.

Indian Newspapers' Co-operative Society Ltd., Janmabhoomi Bhavan, Ghoga Street, Fort, Bombay.

Kerala Newspaper Editors' Association.

Marathi Journalists Conference, Poona.

All Assam Journalists Association.

U. P. Working Journalist's Federation.

Federation of Indian Working Journalists.

Bihar Journalists Association, *Patna.*

The Press Club (Reporters' Club), Calcutta.

Foreign Correspondents' Association, New Delhi.

Press Association, New Delhi.

Press Owners' Association, Calcutta.

Press Owners' Association, Bombay.

INFORMATION SERVICES

Press Information Bureau, Government of India—This Government of India Bureau is responsible for presenting the policies and activities of the Government of India to the public through the Press, for keeping the Government informed of the main trends of public opinion. The Bureau also acts as a liaison between Indian and foreign press correspondents and the Government. The Bureau provides news backgrounds, photographs, features and reference services in seven languages—English, Hindi, Urdu, Bengali, Gujerati, Tamil and Marathi—to over 1,800 Indian newspapers. The Bureau maintains close contact with press representatives accredited to the Government of India and representative organizations like Central Press Advisory Committee, the Press Associations and Foreign Correspondents' Associations.

Bureau's photographic library has 34,000 photographs classified under 300 headings. The Bureau's news and photographs are available to the Indian and foreign Press.

The Defence Wing of the Bureau handles publicity for the Armed Forces. It produces two service journals, *Fauji Akhbar*, a weekly and *Jawan*, a bi-weekly in six and eight languages respectively. It also organises daily Forces Programmes and other military broadcasts from AIR.

There are today three Regional offices of the Bureau in Calcutta, Bombay, Madras which handle publicity for the Government of India offices in the area and distribute all the services of the Bureau to the regional newspapers.

PUBLICATIONS DIVISION—This Division of the Government of India is responsible for the production, sale and distribution of popular pamphlets, books, magazines etc., on matters of national importance. Since independence numerous pamphelts in various languages have been issued by this Division. It also publishes magazines for external publicity.

ADVERTISING BRANCH—This branch of the Government of India is responsible for the production and release of all display advertisements of the Government of India except the Railways.

The media used are the press, posters, folders, calendars, blotters, leaflets, hoardings and cinema slides.

FILMS DIVISION—Films Division of the Ministry of Information and Broadcasting with its headquarters at 91, Walkeshyar Road, Bombay has following sections—Documentary, Newsreel and Distribution. This Division is the organisation for the production and distribution of documentary films and newsreels. The Distribution of films is carried out by five branch centres at Bombay, Calcutta, Nagpur, Lucknow and Madras.

GOVERNMENT OF INDIA TOURIST INFORMATION OFFICES—The Government of India have started Tourist Offices in two or three important cities for information on India.

U. N. INFORMATION CENTRE—Theatre Communication Building, Queen's Way, New Delhi, disseminates information in the activities of the United Nations to Indian People.

U. S. INFORMATION SERVICE—Offices at Delhi, Bombay Calcutta and Madras.

BRITISH INFORMATION SERVICES—Offices at Delhi, Bombay, Calcutta and Madras.

F. A. O. INFORMATION SERVICE—has been established for dissemination of useful information resulting from the work of the Food and Agriculture Organisation of United Nations, Theatre Communication Building, New Delhi.

INDIAN NEWS AGENCIES

United Press of India, Calcutta.
Press Trust of India.
Free Press Agency.
Dhiman Press of India, Ferozepur.
NAFAN—7 Fancy Lane, Calcutta.
Hindustan Samachar, 29, Ghoga St., Bombay.

FOREIGN NEWS AGENCIES

Commonwealth—P.T.I.—Reuters.
France—Agence France Presse.
U.S.S.R.—Tass News Agency.
U. S. A.—Associated Press of America, United Press of America, Central News Agency.

LABOUR IN INDIA

LABOUR REFORM IN INDIA—Indian Government's effort to afford protection to labour had a strange origin. Legislation prior to 1818 attempted merely to regulate conditions of labour so as to help the employers and to ensure that they had a docile labour force at their disposal. The Factory Acts of 1818 and 1891 were passed chiefly because of the anxiety caused to Lancashire by the growing cotton industry of Bombay.

For 20 years after 1891, there was no further advance. In 1911, new Factories Act was passed restricting the hours of work in textile factories to 12.

The period after World War I was an era of progressive labour legislation. The Trade Union movement was born and India's association with I.L.O. supplied a powerful urge in favour of humane conditions in mines, factories and mills. In 1922 the Indian Factories Act was amended so as to embrace many more factories and working hours were reduced to a maximum of 11 hours per day. The Mines Act was similarly amended in 1923 providing for limitation of hours to 60 per week above ground and to 24 per week below ground. It also prohibited employment in mines persons under 13 years of age. A Workman's Compensation Act providing for accidents sustained or disease contracted by workmen was also passed in 1923. Government's anxiety to preserve industrial peace led also to the enactment of Indian Trade Union Act, 1926 as well as Trade Disputes Act, 1929.

The post-war depression and the resultant industrial unrest paved the way for Government taking a deeper interest in labour problem. A *Royal Commission on Labour* in India was appointed in 1929 under the presidency of Rt. Hon. J. H. Whitley.

Between 1931 and the advent a provincial autonomy in 1937, the Central Government effected a number of reforms revising or enacting legislation regarding factory works, miners, plantation labour, railway-men, maritime workers, dock labourers, etc., in the light of the recommendation of Royal Commission on Labour. Perhaps the most advanced social legislation of this period was the enactment of the *Payment of Wages Act* in 1936.

Quickened interest in labour reform was shown by new autonomous provincial governments which came into being in 1937 and which instituted a number of enquiries and enacted a series of legislative measures for amelioration of the working classes. But when the Congress Governments resigned in 1939, there was an end to this progress in the provinces. War years 1939—45 were a remarkable expansion of Indian industries and unparalled rise in employment. At the same time, industrial relations were subjected to increasing strain. There were numerous struggles in respect of wages, dearness allowance, bonus and sharing of war profits. Direct action was resorted to by workers all over the country. End of the war brought further increase in the number of disputes. Inflation and scarcity of foodstuffs, cloth and other consumer goods, the bleak prospect of unemployment owing to demobilization and retrenchment helped to strain the feelings between employers and employed. Added to these, is the new-born political consciousness among the workers.

With the advent of new born independence, the labour unrest was greatly intensified and the National Government began to overhaul the entire machinery of labour, so as to stabilize industrial tranquility. The Government's statement on industrial policy made in Parliament on April 8, 1948, recognised "the proper role of labour in industry and the need to secure for labour for wages and working conditions." It urged that "Labour for its part must give equal recognition to its duty in contributing to the increase in the national income without which a permanent rise in the standard of living cannot be achieved." With this object, they also undertook series of legislations and various methods.

Labour Administration and Labour Legislation—The responsibility for enacting and enforcing labour legislation is shared between the Central and State Governments. Under the Indian Constitution the following subjects may be legislated, cocurrently by the Central and State legislatures—(1) Trade Unions; industrial and labour disputes (2) Social Security and social insurance; employment and unemployment (3) welfare of labour including conditions of work, provident funds, employers' liability, workmen's compensation, invalidity and old-age pensions, maternity benefits (4) vocational and technical training of labour (5) Relief and rehabilitation of refugees.

The following subjects fall exclusively under the jurisdiction of the Union and the States—

Union List—(1) Regulation of labour and safety in mines and oilfields (2) Industrial disputes concerning Union employees.

State List—(1) Relief of disabled and unemployable.

The administration of labour legislation is mainly the responsibility of the State Governments, except in Central undertakings, such as railways, mines, ports and oilfields and Central and State Governments have independent administrative machinery for the enforcement of laws and the promotion of labour welfare. In recent years, the Central Government has endeavoured to secure greater uniformity in the standards laid down and in the efficiency of the enforcement machinery by close consultation with the State Governments and by means of regular Tripartite Labour Conferences. As the result, the tendency has been for the Central Government to enact labour legislation by agreement and for State Governments to confine their activities to its implementation and enforcement.

LABOUR LAWS

The Labour Legislation can be divided into following heads :—(1) *Factories*, (2) *Mines*, (3) *Plantations*, (4) *Transport*, (5) *Legislation relating to workers in shops and commercial establishments*, (6) *Safety and Welfare*, (7) *Wages*, (8) *Social Security*, (9) *Industrial Relations*, (10) *Miscellaneous*.

1. **Factories**—All the Factories Acts from 1881 to 1947 have been annulled and a new act called the Indian Factories Act of 1948 has been passed. The main provisions of the Act are as follows :—(1) It covers all industrial establishments employing 10 or more workers where power is used and 20 or more workers where power is not used. (2) It does away with the distinction between seasonal and perennial factories. (3) Elaborate provision have now been made which specify in clear and precise terms the requirements in regard to health, safety and welfare. (4) The minimum age for employment of children has been fixed at 14 and the upper age-limits of the adolescents have been raised from 17 to 18. (5) The hours of works for adults have been fixed at 48 hours a week and 9 hours a day. The spreadover has been fixed at 10½ hours in a

day. (6) For children and adolescents, the hours of work are 4½ hours a day and the spreadover has been fixed at 5 hours. (7) No adult worker is allowed to work more than 5 hours unless he has had an interval for rest of at least half-an-hour. (8) Employment of children and women between 7 p.m. and 6 a.m. is prohibited. (9) For overtime work the Act provides that employees shall be paid twice their normal rates of wages. (10) Besides weekly holidays, every worker is entitled to leave with wages after 12 months' continuous service at the following rate—Adult : one day for every 20 days of work, subject to a minimum of 10 days. Children : one day for every 15 days of work, subject to a minimum of 14 days.

2. **Mines**—It was in the year 1901 that first Indian Mines Act was passed. It was radically altered in 1935 as a result of the recommendation of the Royal Commission on Labour in India and the adoptation of the draft International Labour Convention on hours of work in coal mines. Since 1935 further change in the Act was made by the amenling Acts of 1936, 1937, 1940 and 1946. In 1952 Indian Mines Act has been passed which consolidates the existing law relating employment and conditions of work in mining industry and to bring it in tune with the provisions of the Factories Act of 1948. (*a*) The Act applies to all mines. A mine has been defined as "any excavation where operation for the purpose of searching for or obtaining minerals has been or is being carried on." (*b*) Hours of work for persons employed on the surface fixed. The daily hours of work and spreadover for person below ground have been fixed. (*c*) The weekly hours of work for all employees are also fixed. (*d*) No person is allowed to work in a mine for more than 6 days in a week ; (*e*) The Act prohibits the employment of children below the age of 15 and no person below the age of 17 shall be allowed to work underground unless he has been certified to be medically fit.

3. **Plantations**—The first legislation regarding plantation labour is the *Tea Districts Emigrant Labour Act XXI of* 1932. The Act deals mainly with the recruitment of workers for the gardens in Assam. The main provisions are—(a) Every emigrant labourer and his family have a right of repatriation at the cost of the employer after the expiry of three years. (2) Provincial governments are empowered to declare any area to be controlled emigration area. (3) Appointment of a Controller of Emigrant Labour. (4) No children below 16 years can proceed to Assam unless accompanied by parents or relatives or in case of married woman unless accompanied by parents or relatives or in case of married woman unless accompanied by her husband. *Plantation Labour Act of* 1951 provides for the statutory regulation of working conditions of labour employed in the tea, coffee, rubber and cinchona plantations.

4. **Transport**—Chapter VI VI (a) of the *Indian Railways Act* 1890 as amended in 1930 deals with the question of hours of work and periods of rest of almost all railway employees except those covered by the Factories Act and the Mines Act. Workers covered by the Indian Railways Act are classified into two categories namely continuous workers and essentially intermittant workers. The administration of the Act since 1946 has been the responsibility of the

Chief Labour Commissioner (Central) and the Regional Labour Commissioners of the three zones into which the Dominion of India has been divided. The other important act regarding transport is *Indian Merchant Shipping Act of* 1923. The conditions of employment of Indian seamen are regulated by the provision of the Indian Merchant Shipping Act.

Another important Act is the *Dock Workers (Regulation of Employment) Act of* 1949 with a view to eliminating the hardship caused to dock workers on account of casual nature of their employment. It empowers the Central Government in the case of major ports and Provincial Governments in respect of other ports to frame a scheme for the registration of dock workers with a view to ensuring greater regularity of employment and for regulating the employment of dock workers, whether registered or not and terms and conditions of such employment in any port.

5. **Legislation Relating to Workers in Shops and Commercial Establishments**—Granting of protection to workers in shops and commercial establishments was first taken by the Government of Bombay which passed an Act in 1939. Other Provinces such as Bengal and Punjab followed suit and passed similar Acts in 1940. The Punjab Act was extended to Delhi in 1942. During 1947 acts on the subject were passed by three more provinces, namely Madhya Pradesh, Uttar Pradesh and Madras. In Assam a Shops and Establishments Act' was passed in 1948. Apart from these provincial Acts there is a Central Act known as *Weekly Holidays Act*, 1942. This Act is permissive in character and provides for the grant of weekly holidays to shopworkers in those provinces which have no legislation on the subject. All the above Acts fix the daily and weekly hours of work. The Acts also fix the holidays and leave. With the exception of Bengal Act, all other Acts have placed restrictions on the employment of children and have made special provisions relating to hours of work rest, intervals etc. of young persons. All the Acts contain provisions for regulating the payment of wages.

6. **Safety and Welfare**—(1) *Indian Dock Labourer's Act* 1934 came into force in 1948. The Act is concerned with the protection against accidents of workers employed in loading and unloading of ships. (2) *The Coal Mines Safety (Stowing) Act of* 1939 provides for the creation of a fund to assist stowing measures. According to the Act the expenses of the Fund are to be met by an excise duty and its administration is entrusted to a Coal Mines Stowing Board. The Act empowers Chief Inspector and Inspectors of Mines to require the owner, agent or manager to take such protective measures. (3) *Coal Mines Labour Welfare Fund* setup under the statutory law in 1944 is the first state managed venture undertaken in this country for the welfare of workers in coal mines. Act provides *inter alia* for the setting up of a fund to be called the Coal Mines Labour Housing and General Welfare Fund which will maintain two accounts, namely the Housing Account and the General Welfare Account. (4) *Mica Mines Labour Welfare Fund*, 1946 provides for the raising of a Fund by the levy of an *ad valorem*

custom duly on all mica exported from the Indian Dominion. The activities under the Mica Mines Labour Welfare Fund include the construction of hospitals, mobile medical units, maternity and child welfare centres, the provision for technical education for miners' children etc. etc.

The Welfare Schemes so far carried out as follows—(1) construction of pithead baths in coal mines, (2) welfare centres for women where lessons in knitting, sewing, spinning, domestic economy etc., are imparted, (3) creaches have been provided in some coal mines, (4) Regional hospitals have been started in some cases, (5) Adult education centres opened in coal-mines.

7. Wages—Prior to 1936 there was no law in the country with the exception of the *Employers and Workman (Disputes) Act of* 1860 to regulate the payment of wages to workers. Largely as a result of the recommendations of the Royal Commission on Labour in India, an Act known as the *Payment of Wages Act (JV of* 1936) was passed in 1936. The main provisions of the Act are as follows : (1) It applies only to wages and salaries which average below Rs. 200 per month employed in any factory and upon any railway. (2) No wage period shall exceed one month. (3) Undertakings employing less than 1,000 persons must pay wages before the expiry of the 7th day and in other cases before the expiry of the 10th day after the wage period. (4) Maximum amount deducted as fines is not to exceed in any month half an anna in the rupee of the worker's earnings. (5) The Act empowers to withhold wages in case of stay-in-strike.

The first step in the direction of fixing minimum wages was taken by the Act known as the *Minimum Wages Act of* 1948 to provide for the fixation of a minimum time rate and a minimum piece rate. The Act requires the Central or Provincial Governments to fix within specified period minimum rates of wages payable to employees employed in industries specified in the schedule appended to the Act. However minimum rates of wages need not be fixed in respect of any employment in which there are in the whole province less than 1,000 employees. The Act provides for the fixation of a (*a*) a minimum time rate, (*b*) a minimum piece rate, (*c*) a guaranteed time rate and (*d*) an overtime rate appropriate to different occupations, localities or classes of work etc.

An act has been passed in 1950 known as *Fair Wages Act* to fix fair wages for workers employed in the first instance in factories and mines. The fair wages will, so long as the cost of living index number exceed a slab of 185 to 200 (the cost of living index number of 1939 being taken as 100), consist of a basic rate and a cost of living allowance. The latter is to be adjusted according to such graduated scales as may be prescribed by the appropriate state government. The employer shall in no circumstances pay his employees a wages less than the minimum wage prescribed therein, irrespective of the capacity of the industries or the unit.

8. **Social Security**—Till 1946, the only measures of social security that existed in this country were the *Workmen's Compensa-*

tion Act and the *Maternity Benefits Act.* But strictly speaking, neither the various Maternity Benefit Acts nor the Workmen's Compensation Act introduced the principle of social insurance in India. They were merely measures of social assistance, placing entirely on the employers the responsibility for the payment of maternity benefits and compensation for employment injuries. *The Employees' State Insurance Act* which received the assent of the Governor-General of India on 19th April, 1948 marks the first attempt to introduce an integrated system of health, maternity and accident insurance.

The Act applies to all perennial factories using power and employing 20 or more persons who earn Rs. 400 or less per month. By the end of 1954, it will cover 2,500,000 workers. Contract labour is also included, provided the employee works on the premises of the principal employer or under his supervision. At the same time, there is a provision for the extension of the Act to any establishment or class of establishments to include other categories of employees.

The scheme is administered by the Employees' State Insurance Corporation. It is composed of 38 members representing the employees and employers, the Central and State Governments, the medical profession and Parliament. Of these, 13 members form a Standing Committee which is in charge of general administration and direction. A Medical Benefit Council, consisting of 28 members, advises the Corporation on medical benefit. The executive head of the Corporation is a Director-General who is assisted by four principal officers. He functions through a net work of regional and local offices. The regional advisory boards include representatives of the employees and employers and the State Governments.

The headquarters of the Corporation deal mainly with matters of policy, supervision, co-ordination and liaison with the Central and State Governments. The regional offices maintain records of employers and insured persons, supervise the work of local offices and the collection of contributions through inspectors and inspection offices.

Claims from insured persons are received and the cash benefits under the Act paid at the local offices in labour areas. Free treatment of insured persons is arranged for by the State Governments at State Insurance Dispensaries or at clinics of panel practioners.

Finance :—The Employees' State Insurance scheme is financed out of contributions from employers and grants and donations from the Central and State Governments. The employees' contributions vary from As. 2 to Rs. 1-4 per week, which amount to 2 to or 2.5 per cent of their average wages. It is only in these regions, where the scheme has been implemented and where the employees are entitled to various benefits under the Act, that they contribute towards the finances for the scheme.

In the first instance, the scheme has been inaugurated in Delhi and Kanpur in July 1950. It will be extended to other places soon.

Medical care and treatment is provided free of charge to insured persons during sickness. In Delhi and Kanpur, dispensaries have full time medical officers to look after insured persons, and when necessary, to visit them at their homes. Drugs and medicines, too, are given free. Arrangements have also been made for mobile dispensaries to visit distant places.

The medical benefit is available at present to insured persons only, but the Act permits its extension to the families of insured persons also as and when the Corporation and the State Governments are able to provide for this.

Sickness Benefit :—An insured person who has paid a minimum number of contributions during a contribution period of six months is entitled to sickness benefit in cash in the event of illness in the corresponding period up to a maximum of eight weeks over a continuous period of 365 days. The rate will roughly amount to 7/12ths of his average wage.

Maternity Benefit :—Maternity benefit is payable to women employees for 12 weeks of which not more than six can precede the expected date of confinement. The payment is at the rate of As. 12 a day or at the rate of the sickness benefit, whichever is higher.

Disablement Benefit :—Insured persons receive periodical payments for disablement from injury during employment. For temporary disablement these amount to about half the average wages for the period of disablement. For the permanently disabled, on the other hand, instead of a lump sum as given under the Compensation Act, the insured persons are entitled to pension for life in accordance with the proportionate loss in their earning capacity.

Dependants' Benefit :—In the event of the death of an insured person, the proceeds of the benefit are required to be distributed among his dependants as follows :—

(i) to the widow of the employee during her life or until remarriage, an amount is payable equal to 3/5ths of the full rate, and if there are two or more widows, the amount shall be divided equally between them ;

(ii) to each legitimate or adopted son, the amount payable is equivalent to 2/5ths of the full rate until he attains the age of 15 or till the age of 18, if his education continues until them ;

(iii) to each legitimate unmarried daughter, an amount equivalent to 2/5ths of the full rate until she attains 15 years of age or until her marriage, whichever is earlier, or till the age of 18, if her education continues till then.

If the benefit exceeds the full rate at any time, the share of each of the dependants shall be proportionately altered so that the total amount payable to them does not exceed the amount of the disablement benefit at the full rate. If none of these dependants is traceable, the benefit will accrue to the parent or the grand-parent or to other dependants. The rate of payment will however be decided upon by the Employees State Insurance Court.

Insurance Court :—There is a provision for the creation of Employees' Insurance Courts and special tribunals for the settlement of disputes. In Kanpur and Delhi such Courts have already been set up.

Workmans' Compensation Act provides for the payment of compensation by employer to the workmen for injury caused by accident during employment. No compensation is payable for temporary disablement for seven days from the date of accident. Besides bodily injury, compensation is also payable for certain occupational diseases. The state governments are authorised to add to the list of diseases, if necessary.

With a view to providing long-term security through establishment of compulsory provident funds for industrial workers, *Employees Provident Fund Act* of 1952 was passed which provides for the compulsory provident fund for employees in industrial establishments and applies to all factories employing 50 or more persons in the textile, iron and steel, cement, engineering, paper and cigarattee industries. The scheme covers about 1500 factories and the benefits extend to nearly 12 lakhs of workers. A Central Provident Fund Commissioner was appointed and regional offices were constituted in many states. Also a Central Board of Trustees was constituted.

Coal Mines Provident Fund and Bonus Schemes Act of 1948 empowers the Central Government to frame a Provident Fund Scheme and a Bonus Scheme for employees in coal mines. The Act lays down that the amount of Provident Fund standing to the credit of any member shall not be assigned or changed or shall not be liable to attachment. Coal Mines Bonus Scheme entitles every employee in the coal mines, subject to certain conditions, to a bonus under the scheme.

Maternity Benefit Acts have been passed by the Central and different states for benefits for women workers. They vary according to the categories of workers benefitting from them and have different qualifying funds. The principle underlying these Acts is the same for all the states. There is provision for payment of cash benefit to women for a specified period before and after child birth and a compulsory period of rest after delivery as well as before delivery, if notice is given.

The Central Act regarding maternity welfare is the *Mines Maternity Benefit Act of* 1941. It applies to women employed in mines covered by the Indian Mines Act.

9. **Industrial Relations**—The main Act regarding the industrial relations is the *Indian Trade Union Act of* 1926. The main provisions of the Act are (*a*) Any seven members of a trade can apply for registration and can be granted a certificate. At least half of the total number of its office-bearers must be persons actually engaged in the industry to which the Union belongs. (*b*) Officers and members of a registered trade union are given protection against criminal proceedings in respect of any agreement for the purpose of furtherance of any legal object of the union. (*c*) Registered trade unions are required to submit annual returns to the employers. The Trade Union Act has been amended in 1951, the main provisions of it relate to the recognition of trade union, compulsory recognition of them on the fulfilment of certain conditions, establishment of labour courts, right of the trade unions to negotiate with employers.

The second important Act under the industrial relations is the *Industrial Employment (Standing Orders) Act of* 1946. This Act extends to the whole of India and applies to all industrial establishments employing 100 or more persons. Under the Act every employer is required to submit to the certifying officer, five copies of the draft standing orders which he proposes to adopt along with the prescribed particulars regarding the workmen employed and the name of the trade union to which they belong. These orders are required to provide for certain matters laid down in the schedule of the Act.

The most important in this category is the *Industrial Disputes Act*, 1947 which came into force on 1st April, 1947 and extends to the whole of India. The "appropriate Government" under this Act means the Central Government in case of such industrial disputes as concern industries run by the Central Government or by any Federal Authority or mines, oilfields and major ports and the Provincial Government in case of other industries. For maintaining harmonious relations between employers and workers and for bringing about concilation or settlement of disputes, the Act provides for the following authorities and procedure—

(1) *Works Committees*—These joint committees of employers and workers giving equal representation to both the parties, are set up in industrial establishments employing one hundred or more workmen. The duty of the Committee is to promote measures for securing and preserving unity and good relations between employers and workmen.

(2) *Conciliation Officers*—These officers are appointed to mediate in and promote the settlement of industrial disputes.

(3) *Boards of Conciliation*—The Boards have practically the same as the Conciliation Officers *i.e.*, to promote settlement of industrial disputes but are set up by the appropriate Government as occasion arises or after the Conciliation Officers have failed to bring about a settlement.

(4) *Courts of Enquiry*—The Courts of Enquiry are set up as the occasion arises for enquiring into any matter connected with or relevant to an industrial dispute. They may consist of only one independent person or of a number of independent persons with a Chairman.

(5) *Industrial Tribunals*—These are constituted by the apporpriate Government for adjudication of industrial disputes and consist of such number of members as the Government may consider appropriate.

If any industrial dispute exists or is apprehended, the appropriate government may refer the dispute to a Board for settlement or to a Court of Enquiry for investigation of any matter or to a Tribunal for adjudication. In two cases, the Government *shall* so refer the dispute (*i*) if the dispute concerns a public utility service and notice or strike has been given and (*ii*) where the parties to an industrial dispute representing the majority of each party apply for reference of the dispute to a Board, Court or Tribunal. After the dispute has been referred to a Board or Tribunal, the Government may order the discontinuance of any strike or lockout in connection with such dispute which may have been in existence on the date of reference.

Any strike or lockout in a public utility service is illegal, if it is commenced or declared without giving the employer or employee a notice of strike or lockout within six weeks before striking or declaring a lockout. Any strike or lockout is illegal if commenced or declared during the pendency of (1) conciliation proceedings before a Board and seven days after the conclusion of such proceedings, (2) Proceedings before a Tribunal and two months after the conclusion of such proceedings or (3) during any period in which a settlement or award is in operation in respect of any of the matters covered by the settlement or award.

The working of *Industrial Disputes Act* revealed that piece-meal adjudication in disputes relating to concerns having branches in more than one State by Tribunals appointed by State Governments created considerable difficulties for the employers. Lack of uniformity in awards in such disputes created discontent among the employees. This become specially apparent in the case of banking and insurance companies. To remedy this defect. *Industrial Disputes (Banking and Insurance Companies) Ordinance* 1949 was promulgated. The ordinance prohibits State governments from referring any industrial dispute concerning banking and insurance companies which have their branches or other establishments in more than one State for adjudication, enquire or settlement and provides abatement of proceedings relating to such disputes pending before State tribunals. Under the ordinance the Central Government constituted an Industrial Tribunal in June 1949 for adjudication of industrial disputes in banking companies. The ordinance has since been replaced by an Act.

In June 1949 Governor-General promulgated another Ordinance called *Industrial Tribunal Payment of Bonus (National Savings Certificates) Ordinance* 1949—The Ordinance declares that notwithstanding anything contained in Payment of Wages Act or other acts, it shall be lawful for any industrial tribunals to direct that any award that may be payable under the award shall, to the extent of any part thereof not exceeding one-half of the amount of bonus in any case be paid in the form of P.O. National Savings Certificate.

10. **Miscellaneous**—(1) *The Children (Pledging of Labour) Act II of* 1933 lays down that any agreement to pledge the labour of a child below fifteen years by the parent in return of any payment or benefit will be null and void and the parent is liable to be fined upto Rs. 50 and the employer upto Rs. 200. (2) *The Employment of Children Act XXVI of* 1938 prohibits the employment of children below the age of 15 in any occupation connected with the transport of passengers, goods or mails by railway or in any occupation involving the handling of goods within the limits of any port regulated by the Indian Ports Act, 1908. No child who has not completed his 12th year can be employed in any of the scheduled occupations *i.e.*, bidi making, carpet making, cement manufacture,

cloth printing, dyeing and weaving, manufacture of matches, explosives and fireworks, mica cutting and splitting, shellac manufacture, soap manufacture, training and wool cleaning. (3) The paucity of well-co-ordinated labour statistics in India has been the subject of adverse comment for a long time. So the *Industrial Statistites Lct of* 1942 was passed. The Act empowers the provincial governments to collect statistics on (*a*) any matter relating to factories and (*b*) price of commodities, attendance, living conditions, indebtedness, rents of dwelling houses, wages and other earning and provident and other funds, benefits and amenities, hours of work, employment and unemployment, industrial and labour disputes. The Act empowers the Statistics Authority to call for required returns and examine the relevant records etc. and penalties have been provided for non-sub-submission. (4) *Legislation relating to indebtedness* has been enacted from time to time to deal with problems incidental to the indebtedness of inlustrial workers. The prominent of these are as follows—(*a*) C. P. Code of 1908 was amended in 1937 to provide for the exemption of attachments of salaries of all workers getting less than Rs. 100 per month and in the case of government employees the first Rs. 100 and the moity of the remainder. It also limits the period of continuous attachment and provides that if a worker's salary has been attached for a period of 24 months, it should remain immune from liability of further attachment for a period of one year. (*b*) C. P. Code of 1908 was again amended in 1936 to prevent imprisonment of debtors. (*c*) Punjab Government has an Act known as *Punjab Relief of Indebtedness Act* of 1936. (*d*) C. P. Government passed an Act known as the *Adjustment and Liquidation of Industrial Workers' Debt Act of* 1936. (*e*) Bengal Government passed an Act known as *Bengal Workmen's Protection Act of* 1934 which provides that any person loitering at or near any factory, workshop etc. with a view to recovering debts from persons employed would be liable to fine or imprisonment. (*f*) M. P. Goernment passed an Act called *C. P. Protection of Debtors' Act* which is more or less on the lines of Bengal Act. (*g*) Madras Government passed a similar legislation in 1941. (*h*) *Bihar Workmen's Protection Act* was passed in 1948 to protect certain classes of workmen from the molestation and intimaidation by their creditors.

Labour Administration

MINISTRY OF LABOUR—Ministry of Labour of the Government of India as now constituted consists of the main Ministry (Secretariat) and the following nine attached or subordinate offices—

Ministry of Labour (Secretariat)—Is the central administrative machinery for the formation of labour policy, for the enforcement of labour laws and for the promotion of labour welfare. It coordinates the activities of Government in the labour sphere. It also forms the Secretariat for the Tripartite Labour Conference and Committees connected with particular industries and is the channel for India's participation in the activities of the International Labour Organisation.

(*a*) *Director-General of Resettlement and Employment, New Delhi*—The organisation was originally set up for finding employment for the ex-services personnel and discharged war-workers. The scope of this organisation has since been extended to meet the needs of all categories of persons in search of employment.

(*b*) *Labour Bureau, Simla*—The Bureau was set up in October, 1946 and has been responsible for (1) collection of labour statistics, (2) maintenance of cost of living index numbers, (3) keeping up-to-date the factual data relating to working conditions collected by the Labour Investigation Committee, (4) conducting research into specific problems with a view to furnishing data required for the formation of policy, (5) editing the monthly *Indian Labour Gazette*, (6) compiling *Labour Code* of various legislative enactments and the statutory rules thereunder and a *Labour Year Book*.

(*c*) *Office of the Labour Commissioner, New Delhi*—The organisation deals with (1) conciliation, (2) examination of welfare measures and advice to the employees and government in connection therewith, (3) operation of labour laws to the extent of Central responsibility, (4) to organise and set up canteens in all Government undertakings, besides offering advice to State Governments, States and Administrations.

(*d*) *Office of the Coal Mines Welfare Commissioner, Dhanbad*—The Commissioner deals with (*i*) the administration of Coal Mines Labour Welfare Fund Act 1947 and (*ii*) the administration of the Mica Mines' Labour Fund Act 1946.

(*e*) *Department of Mines, Dhanbad*—The activities of this Department are (*i*) enforcement of the Indian Mines Act 1923, (*ii*) inspection of mines, (*iii*) investigation of accidents, (*iv*) inspection of electrical installations and machinery, (*v*) technical advice to mine owners, (*vi*) prosecutions, (*vii*) collection of statistics and (*viii*) enforcement of the Mines Maternity Benefit Act, 1941.

(*f*) *Office of the Chief Adviser, Factories, New Delhi*—This office deals with (*i*) technical service on all matters relating to design of factories and working conditions, (*ii*) Administration of the Ind. Dock Labourer's Act, 1934 and the Indian Dock Labourer's Regulations, (*iii*) Factory Administration including training of Factory Inspectors, (*iv*) Information Service, (*v*) preparation of posters, sketches and pictures on industrial safety, health and welfare.

(*g*) *Office of the Controller of Emigrant Labour, Shillong*—The office deals with (*a*) interpretation of the Tea Districts Emigrant Labour Act, 1932 and the Rules. (*b*) recruitment, repatriation of labour and inspection of tea gardens and depots (*c*) compensation cases relating to persons belonging to provincial Civil Labour units and State Labour units who worked on Defence projects.

(*h*) *Industrial Tribunals, Dhanbad, Calcutta and Bomboy*—The Tribunals have been established under Sec. 10 of the Industrial Disputes Act, 1947 to adjudicate on major disputes in the Central or Provincial field.

(*i*) *Office of the Coal Mines Provident Fund Commissioner, Dhanbad*—The organisation was set up in 1948 for (*a*) administration of Coal Mines Bonus Scheme, (*b*) administration of Coal Mines

Provident Fund Scheme which have been formed under Coal Mines Provident Fund and Bonus Schemes Act, 1948.

INDUSTRIAL PEACE

In the wake of independence, the relations between labour and capital became strained due to rising prices and the increased cost of living. This led to the demand of better wages and larger share in the profit.

To meet the situation, the Government convened a *tripartite-conference* comprising representatives of the Government, employers and workers. This conference adopted what is known as *Industrial Truce Resolution*, which was accepted by the Government in April, 1948. The resolution called upon the workers and employers to maintain industrial peace and prevent lockouts and strikes for a period of three years. The resolution urged labour to realise its duty—(1) to increase the national income without which a rise in the general standard of life cannot be achieved, (2) mutual discussion of all problems common to employers and the workers. It also declared that the system of remuneration to capital and labour must be so devised that both should share the product of their common effort after provision for payment of fair wages to labour, a fair return to capital employed and reasonable reserves for maintenance and expansion of the undertaking.

The most important step taken towards the implementation of the industrial truce resolution was the setting up a number of tripartite bodies.

A Central Advisory Council for Labour composed of representatives of the Government, employees and workers was constituted in September, 1948.

Tripartite Industrial Committee were set up in cotton textiles, coal mines, plantations, tanneries, and cement and leather goods factories to establish better relations between employers and employees. *Works Committees*, which are tripartite in composition, were and are being formed in the various undertakings to encourage direct negotiations between employers and employees in the settlement of day-to-day problems at the unit level. Similarly *Production Committees* are being set up at the unit level to deal with questions relating to increase in production. The *Industrial Disputes Act*, 1947 provided more prompt and effective machinery for resolving industrial disputes.

The Central Government and some of the State Governments have established standing industrial tribunals for speedy adjudication of disputes. A number of whole-time conciliation officers have been appointed in different parts of the country.

TRADE UNIONISIM IN INDIA

The trade union movement in India was born with the formation of strike committees after the end of World War I, when there was an outburst of industrial strife. The first attempt at trade union organisation, with regular membership of workers in an industrial centre, was when Mr. B. P. Wadia founded the Madras Labour Union in 1918. It did excellent work in redressing the grievances of workers, but in 1921 the law was made use of against it by employers who obtained an order from the High Court restraining the Union leaders. This event focussed the attention of the public on the need for trade union legislation which did not exist then in the country.

Meanwhile, in 1920, in Ahmedabad, an association of workers was formed, which has become a model union. It was unique in its constitution and in its leadership. Under the guidance of Mahatma Gandhi the Ahmedabad Textile Labourers' Association has been able to build up a solidarity which is unrivalled. The union is one of the strongest in the country. The chief importance of the Union lies in the fact that it has devised an elaborate system of joint conciliation and arbitration with the Ahmedabad Millowners' Association by which this textile centre has been almost free from strikes.

The year 1920 also saw the establishment of the *All-India Trade Union Congress* as a central organisation of labour. The main impetus to its founding was the association of India with the International Labour Organisation. The misgiving that 'yes-men' would be nominated as worker's representatives on the Indian delegation, is said to have moved labour leaders to form the All-India Trade Union Congress.

The growth of a healthy trade union movement in India has been retraded by the tendency of political organisations to use trade union activity to further their political aims.

The passing of the Indian Trade Union Act of 1926 gave not only recognition but also status to trade unions. Their executives and members were granted immunity from civil and criminal liability in respect of strikes. The act also allowed the firms of the registered unions to be spent for the conduct of trade disputes and for the provision of benefits to its members.

The Industrial workers in India are organised in different trade unions affiliated to the following : *Indian National Trade Union Congress, All India Trade Union Congress, Hind Mazdoor Sabha and United Trade Union Congress.*

Under the Trade Unions Act of 1926, the registered trade unions are required to submit annual returns to the Registars of Trade Unions. It is, however, not compulsory for all unions to be registered under the Act.

NATIONAL EMPLOYMENT SERVICE—Employment exchanges were set up in 1945 on the lines advocated by the I. L. O. and are run by the Directorate General of Resettlement and Employment of Ministry of Labour. Special attention is paid to employment seekers with advanced qualifications and special abilities. Whenever possible, special facilities are provided for women. Employers, workers and other special interests are associated with the Employment Exchanges through advisory committees set up at national, regional and sub-regional levels. Nation-wide standardization and unification of policy and procedure is secured by the Directorate-General whose functions are those of coordination. It also compiles statistics and collects useful data necessary for economic planning.

A programme of training in technical and vocational trades is part of the functions of the employment service. A Central Training Institute for instructors is run at Koni-Bilaspur in Madhya Pradesh.

INDIA AND THE I. L. O.—India has been an active member of the I.L.O. from its very inception in 1919. She has been considered as one of the eight leading industrially important countries in the world. Her contribution to the finances of I.L.O. is also considerable, amounting to 5 p.c. of the total revenue of the Organisation.

The International Labour Conferences have so far ratified 90 conventions of which India has ratified for 16 conventions. In addition India has incorporated into her national legislation the essential features of many of the other Conventions (*i.e.*, Child birth Conention, 1919 and the Minimum Age (Revised) Convention 1937.

India is the member of the following seven Industrial Committees of I.L.O.—(1) Textiles, (2) Coal Mining, (3) Iron and Steel, (4) Metal Trades, (5) Building, Civil Engineering and Public Works, (6) Inland Transport and (7) Chemicals.

In addition to International Labour Conferences and Committees, India is also participating in *ad hoc* Conferences convened by I.L.O.

LABOUR AND THE CONSTITUTION

Main provisions relating to Labour are as follows :—

(1) Article 23 prohibits *begar* and other similar form of forced labour and Article 24 lays down that no child below the age of 14 years shall be employed to work in any factory or mine or engaged in any other hazardous employment.

(2) *Article 39 contains certain principles of policy to be followed by the State* :—The State shall, in particular, direct its policy towards securing—(*a*) That the citizens, men and women equally, have the right to an adequate means of livelihood, (*b*) that the ownership and control of the material resources of the community are so distributed as best to sub-serve the common good, (*c*) that the operation of the economic system does not result in the concentration of wealth and means of production to the common detriment, (*d*) that there is equal pay for equal work for both men and women, (*e*) that the health and strength of workers, men and women and the tender age of children are not abused and that citizens are not forced by economic necessity to enter a vocation unsuited to their age or strength (*f*) that childhood and youth are protected against exploitation and against moral and material abandonments.

(3) *Article 41 relates to right to work, to education and to public assistance in certain cases* :—The State shall, within the limits of its economic capacity and development make effective provision for securing the right to work, to education and to public assistance in cases of un-employment, old age, sickness and disaffernment and in other cases of undeserved want.

(4) *Article 42 relates to provision for just and humane conditions of work and maternity relief* :—The State shall make provision for securing just and humane conditions of work and for maternity relief.

(5) *Article* 43 *relates to living wage etc. for workers* :—The State shall endeavour to secure by suitable legislation or economic organisation or in any other way, to all workers, agricultural, industrial or otherwise, work, a living wage, conditions of work ensuring a decent standard of life and full enjoyment of leisure and social and cultural opportunities and in particular, the State shall endeavour to promote cottage industries on an individual or co-operative basis in rural areas.

Labour interest in the three lists : Union, Concurrent and State—

Union list (13) participation in international conference, associations and other bodies and implementing of decisions made thereat. (28) Port quarantine including hospitals connected therewith, seamen's and marine hospitals (55) Regulation of labour and safety in mines and oil fields (61) Industrial disputes concerning Union employees (65) Union agencies and institutions for (*a*) Professional, vocational or technical training ; or (*b*) the promotion of special studies or research (94) Enquiries, surveys and statistics for the purpose of any of the matters in this list.

Concurrent list—(20) Economic and social planning, (21) Commercial and industrial monopolies, combines and trusts, (23) Social security and social insurance employment and unemployment, (24) Welfare of labour including conditions of work, provident funds, employer's liability, workmen's compensation, invalidity and old age pensions and maternity benefits, (25) Vocational and technical training of labour, (36) Factories, (45) Inquiries and statistics for the purpose of any of the matters specified in the concurrent list and State list.

State List—(9) Relief of the disabled and unemployable.

TRADE UNIONS IN INDIA

	No.	*Membership*	*Total income*		*No.*	*Membership*	*Total income*
1941-42	747	573,520	1,767,446	1945-46	1087	946,031	2,467,607
1942-43	693	685,299	1,596,984	1946-47	1725	1,331,962	4,250,331
1943-44	761	780,961	2,318,780	1947-48	2766	1,662,929	5,689,361
1944-45	865	889,388	1,939,969	1948-49	3150	1,960,107	....
				1949-50	3365	1,821,132	....

EMPLOYMENT EXCHANGES

(Monthly average or Calendar months)

		Monthly Registrations	*No. placed in employment*	*No. on register at the end of the period*	*No. of Vacancies outstanding at the end of the period*
1948	..	72,399	21,648	239,033	55,131
1949	..	88,863	21,401	274,335	29,292

1950 ..	100,863	27,599	330,743	28,189
1951 ..	114,613	34,738	328,719	21,776
1952 ..	123,058	29,819	439,571	22,873

EARNINGS OF FACTORY LABOUR*

(*In Rupees*)

1947 ..	737·0	1949 ..	985·9
1948 ..	883·0	1950 ..	964·3

INDUSTRIAL DISPUTES IN INDIA

	No. of Disputes	*Workers involved*	*Loss of man-days*		*No. of Disputes*	*Workers involved*	*Loss of man-days*
1941	369	291,054	3,330,505	1947	1,811	1,840,784	16,562,666
1942	694	777,650	5,779,965	1948	1,259	1,059,120	7,837,173
1943	716	525,088	2,342,287	1949	920	685,457	6,600,595
1944	658	550,015	3,447,306	1950	814	719,883	12,806,704
1945	820	747,530	4,054,499	1951	1,071	691,321	3,818,928
1946	1,619	1,961,948	12,717,762	1952	963	809,000	3,373,000

WORKMEN'S COMPENSATION IN INDIA

	Total No. of cases	*Total compensation paid (Rs.)*		*Total No. of cases*	*Total compensation paid (Rs.)*
1941 ..	39,045	15,84,293	1945 ..	67,390	42,25,339
1942 ..	44,443	18,69,359	1946 ..	55,241	36,25,808
1943* ..	44,826	22,83,991	1947 ..	53,574	33,26,495
1944† ..	31,581	16,96,494	1948 ..	66,776	42,20,068

INDIAN METEOROLOGY

The Meteorological Department was started in 1875 as a result of the findings of the Famine Commision.

General Organisation—The India Meteorological Department is organized into two central offices, *viz.*, the administrative headquarters at Delhi and the technical headquarters at Poona, from which all India weather reports are issued, and five regional meteorological offices located at Bombay, Calcutta, Delhi, Madras and Nagpur. The Colaba and Alibag Observatories (Bombay) specialize in terrestrial magnetism, seismology and atmospheric electricity. The Kodaikanal Observatory is specially equipped for spectroscopic observations and specializes in the study of solar physics. Central Seismographical

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*Figures relate to perennial factories which submit returns under the Payment of Wages Act. They include all workers employed in factories in receipt of a wage or salary not exceeding Rs. 200 including persons who are solely employed in a clerical capacity.

Observatory has been started at Shillong which will be co-ordinating centre for seismographical work in the country.

A sound meteorological organisation is widely recognised to be essential to ensure safety in nagivation not only in the air but also at sea. Indian Meteorological Department looks after these requirements. Besides, it provides timely information about likely storms and heavy rainfall etc., to agriculturists, to engineers attached to railway installations, irrigation or hydro-electric projects and to port authorities.

The demands of civil aviation continue to be on the increase, particularly at the international airports of Bombay, Calcutta and Delhi and in the Bengal-Assam area in connection with the Assam air-lift. The extension of the night air mail scheme to cover the monsoon months necessitated extensions of weather watch to cover night hours at meteorological stations on the air-routes.

During the year 1951 the modernization of the upper air organization of the department was undertaken to enable it to meet the needs of jet-plane air services which require information regarding the winds at altitudes of forty to fifty thousand feet. Five radio-wind stations have been set up and are in regular operation at Delhi, Poona, Calcutta, Madras and Nagpur. As usual, weather reports and climatological information are supplied to army commands and "meteor" reports to artillery units. Meteorological service to the navy continues as before. Fleet synoptics for the Indian Ocean is prepared twice daily at the Poona meteorological office and broadcast through the Poona meteorological radio (VWR).

Since 1947 a great deal of attention has been devoted to improving the quality of meteorological bulletins for farmers. These bulletins are broadcast in the rural programmes of twenty-two All India Radio Stations in seventeen languages.

Notable progress has been made in the sphere of Terrestrial Magnetism, Seismology and Solar Physics. The Magnetic Observatory at Kodaikanal which ceased functioning in 1923 was revived and regular magnetic observations recommenced there from January 1949. Equipment for ionospheric and radio-astronomical studies was also installed at Kadaikanal in 1952. Work on the establishment of a Central Seismological Institute at Shillong is also nearing completion.

A small training section is maintained by the department at Meteorological Office, Poona, to train new entrants and give refresher courses to the technical personnel of the department.

In 1952 eight surface observatories were established in the Andaman and Nicobar Islands. Rainfall and weather in India are greatly influenced by cyclones and depressions originating in the Bay of Bengal in the neighbourhood of these islands. These observatories provide valuable aid in following the growth and progress of such disturbances. Another important development has been the equipping of about 100 ships plying in the Indian seas with meteorological instruments. These ships take four routine observations daily and report them by wireless to the forecasting centres at Calcutta, Madras and Bombay.

Meteorological, seismological and other instruments continued to be manufactured in the department workshops at Poona and New Delhi. In fact most of the meteorological instruments, except thermometers, can now be made within the country. Some new types of meteorological instruments, such as a rainfall recording instrument which can operate for six months without attention, and a rainfall intensity recorder were constructed in 1951.

Services to Aviation—Civil organisation for the provision of meteriological services to aviation in comprised of 5 main meteriological offices at the major aerodromes of Bombay (Santa Cruz), Calcutta (Dum Dum), Delhi (Safdarganj), Madras (St. Thomas Mount), Nagpur (Sonegam); 7 Dependent meteriological offices at other aerodromes; 19 supplementary meteriological offices at smaller aerodromes; and 25 current weather reporting units.

Duties of the Department—(a) issue of short-range weather reports and forecasts including storm warnings, floods, frost etc., (b) issue of medium range forecasts covering a period of 3 to 10 days, (c) issue of long range (seasonal) forecasts of rainfall, (d) custody of the public memory for weather, *i.e.*, preparation of daily, weekly, monthly and annual summaries of the various meteriological elments, (e) compilation and publication of climatological information in the form of Tables, Handbooks and Atlases, (f) organisation and use of time signals for the public, for shipping, (g) other miscellaneous duties, like the computation of times of rise and set of Sun and Moon for various authorities and public bodies.

NORMAL RAINFALL IN THE STATES

	Normal (in.)		*Normal (in.)*
Bay Islands ..	70·9	M. P. East ..	47·5
Assam ..	61·7	M. P. West ..	39·2
West Bengal ..	55·9	Gujrat ..	29·8
Sub-Himalayan W. Bengal	88·6	Saurashtra & Kutch ..	17·5
Gangetic W. Bengal ..	43·0	Konkan ..	93·7
Orissa ..	43·4	Deccan ..	20·6
Chotanagpur ..	43·0	Hyderabad North ..	28·1
Bihar ..	41·9	Hyderabad South ..	29·3
Uttar Pradesh South ..	37·6	Coastal Andhra ..	19·8
Do. West ..	35·3		
Punjab incl. Delhi. &		Tamilnad ..	11·4
Pepsu ..	20·5	Malabar & S. Canara ..	100·3
Rajasthan West ..	9·5	Mysore ..	22·9
Do. East ..	24·6	Travancore-Cochin ..	51·8
Madhya Bharat ..	38·1	Mean of All-India ..	32·9
Vindya Pradesh ..	41·7		

ANNUAL RAINFALL AT CERTAIN PLACES

	Inches		*Inches*
Shillong	84·64	Ootacamund ..	55·56
Darjeeling ..	126·42	Madras	49·92
Simla	61·04	Kanpur	35·91

Dehra Dun	85·04	Lucknow	40·02
Srinagar	25·87	New Delhi	26·24
Cuttack	59·97	Hyderabad (Deccan)	31·66
Jabalpore	55·11	Bangalore	35·37
Nagpur	49·24	Patna	46·69
Poona	27·11	Banaras	40·55
Bombay	71·21	Agra	26·90
Calcutta	62·98	Ahmedabad	28·83
Allahabad	41·82		

NORMAL RAINFALL IN STATES

Madras—		*Punjab—*	
Malabar	100·3	P. East and North	23·4
Madras S. E.	35·7	P. South-West	10·1
Madras Coast, North	37·9	*Bihar—*	
Bombay—		Chotanagpur	52·6
Gujarat	32·5	Bihar	48·4
Konkan	107·4	*Orissa—*	57·6
Bombay, Deccan	30·4	*Madhya Pradesh—*	
Bengal	74·7	M. P. West	46·6
		M. P. East	53·8
Uttar Pradesh—			
U. P. East	39·8	*Assam—*	100·3
U. P. West	37·1	*Kashmir—*	41·4
Andamans & Nicobars	116·2	*Central India—*	
Hyderabad—		West	34·6
North	34·4	*Rajputana—*	
South	29·7	East	42·3
Mysore—	36·2	West	12·8
		East	26·0

ANNUAL MAXIMUM & MINIMUM TEMPERATURES

	Maximum	*Minimum*		*Maximum*	*Minimum*
Shillong	69·9	53·5	Kanpore	89·0	66·0
Darjeeling	58·6	47·9	Cuttack	90·9	72·2
Simla	62·4	49·4	Dehra Dun	81·4	60·8
Srinagar	67·7	43·7	Lucknow	89·7	66·0
Abu	75·8	62·0	Meerut	87·8	63·7
Ootacamund	66·0	49·1	Agra	90·4	63·0
Kodaikanal	63·6	50·8	Ahmedabad	84·6	70·6
Bombay	86·8	73·8	Delhi	88·8	64·5
Madras	92·2	74·9	Jabalpur	88·2	63·6
Calcutta	88·5	70·2	Nagpur	92·1	70·1
Patna	87·	68·9	Poona	89·4	4·7
Banaras	89·5	56·5	Hyderabad (Dn.)	90·3	64·4
Allahabad	90·1	66·4	Bangalore	83·7	63·8

UNITED NATIONS

HOW U. N. CAME—The necessity for forming an United Nations Organization was first discussed at Dumbarton Oaks, Washington D. C. August 21—Oct. 7, 1944. It was finally put to concrete shape by the delegates of 50 Allied Nations asembled at San Francisco from April 25 to June 26, 1945 where representatives of 50 nations signed the United Nations Charter. The U. N. came into existance of October 24, 1945.

PURPOSES OF U. N.—Four purposes of the U. N. are—(1) to maintain international peace and security (2) to develop friendly relations among nations based on respect for the equal rights and self-determination of peoples (3) to co-operate in solving international problems of an economic, social, cultural and humanitarian character and in promoting respect for human rights and fundamental freedoms for all and (4) to be a centre for harmonizing the actions of nations in attaining these common ends.

FINANCE—The United Nations is financed by the contributions from member States. Member States contribute to the expenses of the budget and Working Capital Fund on a scale determined by the General Assembly each year on the recommendation of its Committee on Contributions.

PRINCIPAL ORGANS—U. N. has six principal organs : General Assembly, Security Council, Economic and Social Council, Trusteeship Council, International Court of Justice and the Secretariat.

LANGUAGES—In all the organs of the U. N. other than International Court of Justice, the official languages are Chinese, French, English, Russian and Spanish and the working languages are English and French. In the General Assembly, Spanish is also working language. The official language of the International Court are French and English.

MEMBERS OF THE UNITED NATIONS—Afghanistan, Argentina, Australia, Belgium, Bolivia, Brazil, Byelorussian S.S.R. Burma, Canada, Chile, China, Colombia, Costa, Rica Cuba, Czechoslovakia, Denmark, Dominician Republic, Equador, Egypt, Et Salvador, Ethiopia, France, Greece, Guatemala, Haiti, Honduras, Iceland, India, Indonesia, Iran, Iraq, Israel, Lebanon, Liberia, Luxemburg, Mexico, Netherlands, New Zealand, Nicaragua, Norway, Pakistan, Panama, Paraguay, Peru, Philippines, Poland, Saudi Arabia, Sweden, Syria, Thailand, Turkey, Ukrainian S.S., Union of South Africa, U.S.S.R., United Kingdom, U.S.A., Uruguay, Venezuela, Yemen, Yugoslavia.

FLAGE OF THE UNITED NATIONS—White U. N. emblem (global map projected from the North Pole and embraced in twin olive branches) centred on a rectangular blue banner.

PERMANENT HEADQUARTERS—New York.

ORGANS OF THE UNITED NATIONS

1. **GENERAL ASSEMBLY**—All member States are represented in the General Assembly. It is the main organ of the U.N. Each member may have five delegates but only one vote. The General Assembly meets once a year in September. All decisions on important questions are made by a two-thirds majority of those present and voting; a simple majority will suffice in other less important questions.

Its main functions are to consider and make recommendations on the principles of international co-operation in the maintenance of peace and security, including the principles governing disarmament and regulation of armaments, to discuss and move recommendations on any world problem, to make recommendations for the peaceful settlement of any situation which might impair friendly relations among nations.

Organisation—The General Assembly does most of its work in committees, of which there are four types: Main Committees, Procedural Committees, Standing Committees and *ad hoc* Committees.

Main Committees deal with agenda referred to them by General Assembly and prepare recommendations for submission to its plenary meetings and are six in number: 1. First Committee (Political and Security including Regulation of Armaments); 2. Second Committee (Economic and Financial): 3. Third Committee (Social, Humanitarian and Cultural); 4. Fourth Committee (Trusteeship including non-self-governing territories); 5. Fifth Committee (Administrative and Budgetary); 6. Sixth Committee (Legal).

Procedural Committees deal with organisation and conduct of the Assembly's business and are two in number: 1. General Committee; 2. Credentials Committee.

Standing Committees deal with continuing problems and have two Committees: 1. Advisory Committee on Administrative and Budgetary question. 2. Committee on contribution.

Other standing bodies established by the Assembly are: Board of Auditors, International Law Commission, Investments Committee, U. N. Staff Pension Committee.

Ad Hoc Committees: General Assembly or any of its Committees may appoint Committees for special purposes such as U. N. Special Committee on the Balkans. U. N. Commission on Korea, U. N. Conciliation Commission for Palestine etc.

Members—Five permanent members are China, France, U.S.S.R., United Kingdom and United States. Non-permanent members are elected by the General Assembly for a two-year term. Each member has one representative.

2. **SECURITY COUNCIL**—Eleven members, five of them permanent and six elected by the General Assembly compose the Security Council, the organ on which Member States have conferred primary responsibility for maintaining peace and security. Permanent members are China, France, United Kingdom, U. S. A. and U.S.S.R.

Its functions are to maintain international peace and security, to investigate any dispute which might lead to international friction, to use economic or military sanctions to prevent or stop aggression.

Decisions on all procedural matters are made by affirmative vote of at least seven members. Decisions on other (*i.e.*, substantive) matters are made by an affirmative vote of seven members, including the concurring votes of the permanent members except that any member must abstain from voting in decisions concerning the pacific settlement of a dispute to which he is a party. (A negative vote by a permanent member on a matter of substance is popularly referred to as a "veto").

Because the maintenance of peace requires constant vigilance and may call for prompt action, the Security Council is in permanent session and generally meets at least once a fornight.

Subsidiary organs reporting to the Security Council are :

(*a*) *Military Staff Committee*—Composed of the Chiefs of the Staff of five permanent members (or representatives) advises and assists on questions of military requirements for maintenance peace, etc.

(*b*) *Atomic Energy Commission* set up by General Assembly reports the Security Council and is accountable to it on all matters affecting security. All members of the Security Council are represented to it and it addition Canada when that country is not a member of the Security Council.

(*c*) *Committee for Conventional Armaments* for the general regulations and reduction of armaments and armed forces.

(*d*) *Standing Committees*—Such as Committee of Experts on rules of procedure and other technical matters and Committee on the Administration of new members.

(*e*) *Ad hoc Committees and Commissions* established when required to deal with temporary questions *i.e.*, U. N. Commission on Indonesia, U. N. Commission on India and Pakistan.

3. **ECONOMIC AND SOCIAL COUNCIL**—is composed of eighteen members elected by the General Assembly. The Council is responsible for promoting (1) higher standards of living, full employment, and conditions of economic and social progress and development. (2) solutions of international economic, social, health, and related problems, (3) international cultural and educational co-operation and (4) universal respect for and observance of, human rights and fundamental freedoms for all without distinction as to race, sex, language or religion.

The Council works through (A) *Regional Commissions* as some problems could be best dealt with on regional basis such as, Economic Commission for Europe (ECE), Economic Commission for Asia and the Far East (ECAFE) and Economic Commission for Latin America (ECLA).

(B) *Functional Commissions.*

They are—(1) *Economic and Employment Commission*, (2) *Transport and Communications Commission*, (3) *Fiscal Commission*,

(4) *Population Commission,* (5) *Social Commission,* (6) *Human-Rights Commission,* (7) *Commission on Narcotic Drugs,* (8) *Commission on Status of Women* and (9) *Statistical Commission.*

(C) *Standing Committees.* consisting of (1) Committee on Negotiations with Inter-governmental Agencies, (2) Council Committee on Non-Goernmental Organizations, (3) Agenda Committee, (4) Interim Committee on Programme Meeting.

(D) *Ad Hoc Committees.*

(F) *Special bodies,* such as Permanent Central Opium Board, Supervisory Body, U. N. International Childrens' Emergency Fund, Administrative Committee on Co-ordination, Interim Co-ordinating Committee for International Commodity Arrangements.

4. **TRUSTEESHIP COUNCIL**—United Nations accept as a sacred trust the obligations to promote the well-being of non-self-governing peoples in territories held either under League of Nations mandates or territories taken from the enemy States as outcome of World War II or whose population voluntarily wish to place themselves under the Council. The members of U. N. have set up an international trusteeship system for administration of territories placed under U. N.

The Trusteeship Council consists of (1) an equal number of member States administering and not administering Trust Territories, (2) permanent members of the Security Council which do not administer Trust Territories and enough other non-administering countries elected by the Assembly for three year terms, as will ensure that the membership of the Council is equally divided between administering and non-administering members.

The present membership consists of (*a*) Administering countries—Australia, Belgium, France, New Zealand, United Kingdom and U.S.A. ; (b) other countries—China, Iraq, U.S.S.R. ; Philippines, Dominician Republic, Argentina.

Trusteeship territories—(1) New Guinea (*Australia*), (2) Ruanda-Urundi (*Belgium*), (3) French Cameroons and French Togoland (*France*), (4) Western Samoa, (*New Zealand*), (5) British Cameroons, British Togoland, Tanganyika (*United Kingdom*), (6) Nauru (*Australia*), (7) Marianas, Marshalls and Carolines formerly belonging to Japan (*U.S.A*).

5. **INTERNATIONAL COURT OF JUSTICE**—Its purpose is to act as principal judicial body of the United Nations. It is a Court of Law and deals with legal questions only, not with political disputes. All countries parties to the Court can refer to it any case they wish. In addition, Security Council may refer a legal dispute to the Court and all organs of the U. N. can ask the Court for an advisory opinion on any legal question.

The Court consists of fifteen Judges elected by the General Assembly and the Security Council voting independently.

SECRETARIAT—is composed of a Secretary-General appointed by the General Assembly upon the recommendation of the Security Council and such staff as the organisation may require. Secretary-

General is the Chief Administrative Officer of the United Nations. He is assisted by an international staff recruited on the basis of their qualifications.

Departments of the Secretariat—(*a*) Department of Security Council Affairs, (*b*) Department of Economic Affairs, (*c*) Department of Social Affairs, (*d*) Department of Trusteeship and Information, from non-self-governing countries, (*e*) Department of Public Information, (*f*) Legal Department, (*g*) Department of Conferences and general services, (*h*) Department of Administrative and Financial Services.

SPECIALISED AGENCIES OF THE U.N.

INTERNATIONAL LABOUR ORGANISATION (I.L.O.)—The I.L.O. has as its motto ; "If you wish for peace, work for justice." As inter-governmental agency, it seeks by international action to improve labour conditions, raise living standards and promote economic and social stability.

In 1944, I.L.O. adopted what is known as "*Declaration of Philadelphia*." It affirms these principles : that labour is not a commodity ; that freedom of expression and of association are essential to sustained progress ; that poverty anywhere constitutes a danger to prosperity everywhere ; and that war against want requires to be carried out with unrelenting vigour within each nation and it maintains—"all human beings irrespective of race, creed, or sex have the right to pursue both their material well-being and their spiritual development in conditions of freedom and dignity of economic security and equal opportunity.

It was established on 11th April, 1919, as an autonomous institution associated with the League of Nations. *I.L.O. Headquarters*: Geneva, Switzerland.

I.L.O.'s machinery consists of (1) *International Labour Conference* which is I.L.O's highest authority. It is the policy making authority of the organisation. It meets annually and is composed of national delegations comprising two government delegates and one delegate each representing management and labour. The chief function of the Conference is to formulate international social standards in the form of conventions, (2) *Governing body* comprises the representatives of 16 governments, eight management members and eight labour members, (*c*) *International Labour Office* is the secretariat of the I.L.O.

FOOD AND AGRICULTURE ORGANISATION OF UNITED NATIONS (FAO.)—The chief aims of F.A.O. are (1) To help nations raise the standard of living (2) to improve nutrition of the peoples of all countries, (3) to increase the efficiency of farming, forestry and fisheries, (4) to better the condition of rural people and, through all these means, to widen the opportunity of all people for productive work. F.A.O. was founded in October 16, 1945. *Headquarters*: Viale delia Terma de Caracolla, Rome, Italy.

UNITED NATIONS EDUCATIONAL SCIENTIFIC AND CULTURAL ORGANISATION (UNESCO)—"The purpose of the organisation" declares Article I of the UNESCO constitution is to contribute to peace and security by promoting collaboration among the nations through education, science and culture in order to further-universal respect for justice, for rule of law and for the human rights and fundamental freedoms, which are affirmed for the peoples of the world without distinction of race, sex, language or religon by the charter of the United Nations." It was established on 4th Nov., 1946. *Office*—Unesco House, Avenue Kleber, Paris 16 France.

INTERNATIONAL CIVIL AVIATION ORGANISATION (ICAO)—is designed to solve the problem of international civil aviation and establishment of international standards and regulations for civil aviation. The aims and objects of ICAO are to develop the principles and techniques of international air navigation and to foster the planning and development of international transport. It was established on 4th April, 1947 : *Headquarters* : International Aviation Building, Montreal, Canada.

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT (BANK)—is designed to assist in the reconstruction and development of territories of members by facilitating the investment of capital for productive purposes, to promote private foreign investment, to supplement private investment by providing finance for productive purposes, to conduct operations with due regard to the effect of international investment on business conditions in territories of members and to assist in bringing about a smooth transition from a war time to a peace time economy in the immediate post-war years.

The activities of the Bank and International Monetary Fund are complementary. The Bank works through a Board of Governors, Executive Director, a President and a staff.

The authorised capital of the Bank is $10,000,000,000. This capital stock is divided into shares of $100,000 each available for subscription only to members and transferable only to the Bank. The smallest subscription being for two shares and the largest that of U.S.A. for 31,750 shares. The Bank is authorised to call only 20 p.c. of the Capital subscribed by members for use in its operations. The remaining 80 p.c. of the subscription of each member is subject to call only if needed to meet obligations of the Bank for fund borrowed or on loans guaranteed by it.

Headquarters :—1818H—Street, Washington 25.

INTERNATIONAL MONETARY FUND (FUND)—The International Fund was established to facilitate the expansion of balanced growth of international trade and to contribute thereby to the promotion and maintenance of high levels of employment and real income and to the development of the productive resources of all members as primary objectives of economic policy.

To promote exchange stability, to maintain orderly exchange arrangements among members, and to avoid competitive exchange depreciation.

To give confidence to members by making the fund's resources available to them under adequate safeguards.

The Fund works through a Board of Governors, Executive Directors and a Managing Director and a staff.

To carry out its functions, the Fund has resources subscribed by the member governments.

Difference between Bank and Fund—Difference between the two is that the Bank *lends* while the Fund *sells*. The Bank, does not arrange currency transactions—that is a job for the Fund, which also negotiates for the removal of currency restrictions. The Bank on the other hand, assists by long-term credits for reconstruction and development ; it can make a direct loan out of its own funds or out of funds raised in the market of a member-State, and will assist a country in financing irrigation or hydro-electric power projects.

The membership of the International Bank was 50 countries, the same as that of International Monetary Fund. The Bank may use the paid-in or 20 p.c. of the capital subscription for making loans and obtain additional funds by borrowing in the world's capital markets. The remaining 80 p.c. of the Bank's subscribed capital must meet its obligations.

WORLD HEALTH ORGANISATION (WHO)—The constitution of the WHO defines health as a "state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". It sets down as the objective of the Organisation "the attainment of all peoples of the highest possible level of health." The WHO works through World Health Assembly, an Executive Board and a Secretariat. It came into being on April 7, 1948. *Headquarter* : Palais des Nations, Geneva, Switzerland.

UNIVERSAL POSTAL UNION (UPU)—Its purpose is to alleviate the uncertainty, confussion and excessive cost of international postal communications by uniting its member-countries in a single postal territory for the reciprocal exhange of mail. Its aim is to insure the organisation and improvement of postal services throughout the world through international collaboration.

UPU fixes the international rates for all types of postage—letters, postcards, packages, samples, periodicals, books, etc., specifying the minimum and maximum rates which may be charged by any postal administration in the world.

It was established in 1874 by Universal Postal Convention of Berne, Switzerland, and its headquarters are at Berne, Switzerland.

INTERNATIONAL TELECOMMUNICATION UNION (ITU)—The organization through which countries now regulate international telecommunication was formed in 1934 but reorganised in 1947. The I.T.U. has threefold missions—(1) to maintain and extend international co-operation for the improvement and rational use of telecommunication. (2) To promote the development and most efficient operation of technical facilities by establishing standards and operating rules in order to improve tele-communication services, increase their usefulness and, as far as possible, make them generally available. (3) To harmonise the action in the attainment of these common ends.

Two organisations, the I.T.U. founded in Paris in 1865 and International Radiotelegraph Union founded in Berlin in 1906 were merged by the Madrid Convention of 1932 to form International Telecommunication Union. I.T.U. came into being on January 1, 1934.

INTERNATIONAL REFUGEE ORGANISATION (IRO)—The functions of the IRO are : (1) the repatriation of refugees and the displaced persons, (2) their identification, registration and classification, (3) their care and assistance, legal and political protection, (4) their transport and (5) their resettlement and re-establishment in countries able and willing to receive them. The IRO was offically established on August 20, 1948.

WORLD METEOROLOGICAL ORGANISATION (WMO)—This organisation as stated in the preamble to its convention, is established with a view to co-ordinating, standardising and improving world meteorological activities and to encouraging an efficient exchange of meteorological information between countries in the aid of human activities.

The WMO will come into existence after 30 States have ratified or acceded to the convention adopted on October 11, 1947

INTER-GOVERNMENTAL MARITIME CONSULTIVE ORGANISATION (IMCO)—This organisation when it comes into being—will provide inter-governmental co-operation concerning all matters relation to international shipping ; to encourage the highest standards of maritime safety and efficiency of navigation ; to promote the availability of shipping services to the commerce of the world without discrimination ; to consider unfair restrictive protection by shipping concerns—will not come into being until 21 nations, of which 7 must each have a total tonnage of at least one million gross tons of shipping had become parties to convention.

INTERNATIONAL TRADE ORGANISATION (ITO)—As provided in the Havana Charter, the objectives of the ITO, when it comes into existence are :—to assure a large and steadily growing volume of real income and effective demand, to increase the production, consumption and exchange of goods, to help promote industrial and general economic development, to encourage international flow of capital for productive investment, to further the enjoyment by all countries on equal terms of access to the markets, products and productive facilities for their economic prosperity and development, to promote the reduction of tariffs and other trade barriers and the elimination of discriminatory treatment in international commerce, to enable countries to abstain from measures disrupting world commerce and reducing employment and to facilitate the solution of problems relating to international trade in the fields of employment, economic development, commercial policy, business practices and commodity policy.

THE INDIAN CENSUS, 1951

The Census of 1951 is the eighth regular census of India and first census of free India.

The counting started on the 9th February and enumeration was completed by 3rd March, 1951. 5,92,937 enumerators visited six crores and forty-four lakhs of houses. The enumeration records were assembled and checked at 52 Tabulation offices.

NEW FEATURES—The 1951 census differs from the previous ones in nature as well as scope.—(1) Until 1931, the census used to be a one-night affair or 'convulsion' as it was called, haphazardly arranged and conducted. People were enumerated as they came out of trains and cars, in fact wherever the enumerator happened to find them in the course of his round. Though spectacular, this mode of enumeration did not yield accurate results. The data obtained left much to be desired. The system has, therefore been given up and the 1951 census was spread over a period of 20 days, from February 9 to the night preceding March 1, 1951.

(2) Another significant departure from past practice is that the caste tables, previously compiled partly to represent India as a caste-ridden country and partly to meet the needs of administrative measures based on caste divisions, have been discarded. Only four special groups, namely, scheduled castes, scheduled tribes, Anglo-Indians and backward classes for which special safeguard have been provided in the Constitution, have been enumerated. The emphasis this time is on the economic condition of the people.

(3) The occupational distribution of the population which was abandoned in 1941 has been introduced again with a more simple and scientific classification. The entire ppoulation of the country has been divided into two broad livelihood categories—(1) Agricultural (2) Non-agricultural, Each category is divided into four classes.

(4) Nine part A States, nine part B States and ten part C States in addition to a few Part D Territories have been grouped into six Population Zones, such as, North India, East India, South India, West India, Central India and North-West India.

(5) Independently of the above grouping, the country as a whole is divided into Five Natural Regions on the basis of Physical Features. They are: Himalayan Region, Northern Plains region, Peninsular Hills and Plateau Region, Western Ghats and Coastal Region and Eastern Ghats and Coastal Region. These five regions are in turn is divided into 16 Sub-Regions and 52 divisions (the Bay islands form 53 Division). Thus the study of population changes in relation to geographical and economic factors is made possible.

(6) Another feature of the 1951 census is that instead of calculating the percentage variation as was done in past censuses "the mean decennial growth rate" has been calculated. The later is based on the average of the population of 1941 and 1951 taken together and not solely on the population of 1941 which is the base in the calculation of the percentage variation.

OMITTED REGIONS—(1) owing to special reasons, the census was not taken in the Part B States of Jammu and Kashmir, (b) Part B Tribal Areas of Assam.

Population of Jammu and Kashmir was enumerated at 4,021,616 in 1941. It is estimated at 4·37 millions as on 1-3-50. With reference to these figures, it is estimated that the population of this State as on 1-3-1953 was 4·41 millions.

A local estimate indicated that population of Part B Tribal Areas of Assam was about 0·66 million.

RURAL-URBAN RATIO—The census figures indicate a significant bias towards urbanisation. The total rural population in 1951 was 295·0 millions or 82·7 per cent of the total population. There are 73 cities (towns having a population of one lakh and above) with a combined population of 24·13 millions or 6·8 p.c. of the total population. In the larger cities like Bombay, Poona, Bangalore, Madras, Calcutta and Delhi, the mean decennial growth rate ranged between 19 per cent and 63 per cent. Apart from the City States Ajmer and Delhi, the most highly urbanised States in India include Saurashtra (33·7 per cent), Bombay (31·1 per cent), West Bengal (24·8 per cent) and Mysore (24·0 per cent); among the least urbanised States are Orissa (4·1 per cent), Assam (4·6 per cent) and Bihar (6·7 per cent). The biggest cities of India are in Bombay (2·8 m.), Calcutta (2·5 m.), Madras (1·1 m.), Hyderabad (1·1 m.), Greater Calcutta however has a population of 3·5 millions. There are 55 cities in Part A States, 16 in Part B States 4 in Part C States and none in Part D. Territories.

TOTAL POPULATION—The total population of India including the estimated figure of Jammu and Kashmir (4·41 m.) and Part B Tribal Areas of Assam (0·66 m.) on March 1, 1951 was 361·8 millions.

Total population (covered by census)	356, 879,394
Total population in 1941 ..	314,766,380
Net increase (1941-51) ..	42·06 millions
Mean decennial growth ..	12·5 p.c.
P. C. increase ..	13·4 p.c.

SPECIAL FEATURES—About 83 per cent of the population (2·95 millions) reside in rural areas. The urban population is 61·8 millions. Distribution by occupation is as follows—

	(*Millions*)	
1. *Agricultural Classes* of which :	249	(or 70 p.c. of the total)
(a) Cultivators of land wholly or mainly owned and dependents	**167·35**	
(b) Cultivators of land but landless	**31·64**	
(c) Cultivating labourers and dependents	**44·82**	
(d) non-cultivating owners of land, agricultural rent receivers and dependents	**5·33**	

2. *Non-Agricultural Classes* of which :	108 (or 30 p.c.)
(e) persons deriving living from production other than cultivation	37·66
(f) commerce	21·31
(g) Transport	5·61
(h) other services	42·98

CITIES—India has 73 cities with a population of 1,00,000 and over. This clearly indicates a shift in the population from rural to urban areas.

In cities, specially industrial ones, males preponderate over females, such as in Calcutta, Bombay, Kanpur, Ahmedabad, New Delhi, etc.

States having cities with a population of 1,00,000 or over as follows—Bombay—8 cities; U.P.—16 cities; Bengal—6 cities; Madras—4 cities; Bihar—5 cities; Punjab, Madhya Bharat, Mysore, Rajasthan, Saurashtra—3 cities each ; Madhya Pradesh and Travancore Cochin—2 cities each; Ajmer and Manipur—1 city each.

POPULATION OF STATES—*Six States* with more than two crores of population are : Uttar Pradesh (632), Madras (570), Bihar (402), Bombay (360), West Bengal (248) and Madhya Pradesh (212). There are *Eight States* whose inhabitants number between half a crore and two crores : Hyderabad (187), Rajasthan (153), Orissa (176), Punjab (126), Travancore-Cochin (93), Mysore (91), Assam (90) and Madhya Bharat (80). There are sixteen political units all of whose inhabitants taken together, number only 2 crores in all: Jammu & Kashmir (44), Saurashtra (41), Vindhya Pradesh (36), Pepsu (35), Delhi (17), Himachal Pradesh (10), Bhopal (8), Ajmer (7), Tripura (6), Kutch (6), Coorg (2), Sikkim (1), Bilaspur (1) ; and finally two other territories with less than halp-a-lakh each, namely Chandernagore and Andaman & Nicobar Islands.

RELIGION—Number of persons possessing different religions (exclusive of Jammu & Kashmir and Part B Tribal Areas of Assam and also exclusive of 268,602 persons in the Punjab whose enumeration record was destroyed by fire before the information about religion could be tabulated—

	No. in lakhs	*No. per 10,000*
Hindu	3,032	8,499
Sikh	62	174
Jain	16	45
Buddhist	2	6
Zorastrian	1	3
Christian	82	230
Muslim	354	993
Jew	..	..
Tribal	17	47
Non-Tribal	1	3
All Religions	3,567	10,000

INDIA AND THE WORLD—India's total population is the second highest in the world. So far as land area is concerned, she ranks seventh in the world next to U.S.S.R., China, Canada, Brazil, U.S.A. and Australia. India occupies 2·2 per cent of the total land area of the world and supports 15 p.c. of the world population against China's 19. In Asia next to Japan, Lebanon and Korea, she has the highest density of population. The population of India is more than combined population of North America and South America, about twice the population of Africa and about 44 times the population of Australia. It is 1·8 times the population of U.S.S.R., 2·4 times the population of U.S.A. and 7 times the population of United Kingdom. Humanity consists of not less than six and not more than seven persons for every person living in India. But the total land area of all the countries of the world is well over forty times as extensive as India. The total number of people living in U.S.S.R. and U.S.A. put together is slightly smaller than the total number of the people of India. But the land area of these two countries is far more than nine times as large and not far short of ten times as large as India.

ZONES

Six Zones—For census purpose, India has been divided into six 'zones' : *North India, East India, South India, West India, Central India* and *North-West India.*

North India—Uttar Pradesh.

East India—Bihar, Orissa, West Bengal, Assam, Manipur, Tripura, Sikkim and Chandernagore.

South India—Madras, Mysore, Travancore-Cochin and Coorg.

West India—Bombay, Saurashtra and Kutch.

Central India—Madhya Pradesh, Madhya Bharat, Hyderabad, Bhopal and Vindhya Pradesh.

North West India—Rajasthan, Punjab, Pepsu, Jammu & Kashmir, Ajmer, Delhi, Bilaspur and Himachal Pradesh.

Andaman & Nicobar Islands is not included in any Zone.

BASIC FIGURES OF EACH ZONES OF LAND AND POPULATION

	Land area (lakhs of acres)	*Pop. (lakhs)*	*Land area per capita (acres)*
North India ..	726	632	1·15
East India ..	1,675	901	1·86
South India ..	1,075	756	1·42
West India ..	957	407	2·35
Central India ..	1,852	523	3·54
N. W. India ..	1,226	350	3·51
India (Ex. Jammu & Kashmir) ..	7,532	3,569	2·11
India (including Jammu & Kashmir) ..	8,126	3,613	2·25

TOPOGRAPHY

Total area of India ..	81 Crores and 26 lakhs of acres	
Mountain area ..	8 Crores and 69 ,, ,,	(10·7 p.c.)

Hill area	15 Crores and 9	„	„	(18·6 p.c.)
Plateau area	22 Crores and 48	„	„	(27·7 p.c.)
Plains area	34 Crores and 99	„	„	(43·0 p.c.)

VILLAGES & TOWNS IN INDIA

No. of Villeges	558,089	No. of Towns	3,018
Population in Villages	2,950 lakhs	Population in Towns	619 lakhs

URBAN POPULATION

All India p.c. of urban population is 17·3 p.c.—just a little more than one in six. The proportion varies from zone to zone—

West India	31·2 p.c.	Central India	15·8 p.c.
East India	11·1 p.c.	North India	13·6 p.c.
North West India	21·4 p.c.	All India	17·3 p.c.
South India	19·7 p.c.		

TOWNS

All towns with population of one lakh and over is called *'Cities,'* those with a proportion of 20,000 to a lakh are called *major towns*, those with a population of 5,000 to 20,000 are called *miner towns*, and those with a population under 5,000 are called *townships.*

	No. of towns	*No. of town dwellers (lakhs)*	*Urban pop. percentage*
Cities	73	235	38·0
Major towns	485	186	30·1
Minor towns	1,848	178	28·6
Townships	612	20	3·3
	3,018	619	100·0

Ten Largest Inhabited Localities

	Pop. in lakhs		*Pop. in lakhs*
Greater Calcutta	45·78	Ahmedabad	7·94
Greater Bombay	28·39	Bangalore	7·79
Madras	14·16	Kanpur	7·05
Delhi	13·84	Poona	5·89
Hyderabad	10·86	Lucknow	4·97

SEX RATIO

The number of females per 1000 males according to 1951 census is 947. In general, the sex ratio is smaller in towns than in villages.

For the country as a whole, the sex ratio in villeges is 966, while that in towns is 860. But it varies widely among the zones—

	No. of females per 1000 males		No. of females per 1000 males
North West India	.. 883	East India	.. 945
South India	.. 999	Central India	.. 973
North India	.. 910	All India	.. 947
West India	.. 938		

Sex Ratio in Ten Large Cities

	Sex ratio		Sex ratio
Greater Calcutta	.. 602	Ahmedabad	.. 764
Greater Bombay	.. 596	Bangalore	.. 883
Madras	.. 921	Kanpur	.. 699
Delhi	.. 750	Poona	.. 833
Hyderabad	.. 989	Lucknow	.. 783

MARITAL STATUS

Out of every 10,000 persons in India there are 5,133 males and 4,867 females. Among them 2,521 males and 1,886 females are unmarried. If we reckon males and females together, the unmarried people are 44·1 p.c. of the population.

Marriage rates—Among persons aged 15 and over, 20·3 p.c. of males and 6·4 p.c. of females are unmarried. In two zones, North and Central India, unmarried women are fewer forming only 4·0 p.c. South India with 10·1 p.c. has the largest number. The other three zones East India (6·0), West India (6·5), North East India (6·2) are round about All India average. Of the population as a whole, 44·1 p.c. is unmarried. Out of 10,000 persons (not reckoning displaced persons) 5,133 are males and 4,867 are females.

According to zones, the proportion of unmarried people is as follows:—

	Unmarried people		Unmarried people
South India	.. 48·2 p.c.	North West India	.. 46·1
Central India	.. 41·1 p.c.	East India	.. 42·2
West India	.. 47·0 p.c.	North India	.. 41·4

Unmarried Males & Females

	Percentage of unmarried among males	Percentage of unmarried among females
North India ..	.. 46·3	35·9
East India ..	.. 46·3	37·8
South India ..	.. 54·3	42·1
West India ..	.. 52·6	40·9
Central India ..	.. 46·5	35·6
North West India ..	.. 50·1	41·4
India ..	.. 49·1	38·8

CHILD MORTALITY

The mortality of children under age 5 is heavy. Among them the mortality of infants, who die before they complete one year of age is specially heavy. During the decade ending 1931 it was 176 infant deaths per 1,000 births. During the next decade, it was 164. During the last decade (1951), it was 152. These figures are based on registration. Out of 27 deaths of persons of all ages which occur annually among 1,000 persons in India, 11 deaths occur among children under 5 years of age. Out of these eleven deaths, it a almost certain that 7 occur among infants who have not completed one year of age.

FUTURE GROWTH OF POPULATION

Is the considered opinion of the census authorities that unless the rate of the growth of population is checked by contraception or a break down of food supply of a serious nature, population will increase during 1951-80 at a faster rate than during 1921-50. So the following forecast which errs on the side of under-statement, can be accepted.

	Pop. in crores		*Pop. in crores*
1951 ..	.. 36	1971 ..	.. 46
1961 ..	.. 41	1981 ..	.. 52

BIRTH RATES AND DEATH RATES

During the ten years 1941-50, births occured at an average rate of 40 per thousand per annum and deaths at 27 per thousand per annum.

Hence, the natural increase of the population has been occuring during 1941-50 at an average rate of 13 per thousand per annum.

	Birth rate per 1000 *pop.*	*Death rate per* 1000 *pop.*
Central India ..	.. 44	34
South India ..	.. 36 or 37	21 or 22
West India ..	.. 42	26
North West India ..	.. 41 or 42	24 or 25 or 26
North India ..	.. 38	27 or 28
East India ..	.. 39	26 or 27 or 28

AGE STRUCTURE

Age Structure—The age structure of the Indian people has a striking difference from western countries—the juvenile proportion of our population is much higher than in U.S.A. or European countries and a little higher than Japan.

JUVENILE PROPORTION

	Percentage to total population of		
	Persons under age 15	*Infants & young children*	*Infants*
Europe	26·9	9·8	2·0
Germany	23·5	7·0	1·5
U. K.	22·5	8·6	1·5
Italy	26·3	9·2	1·8
France	21·8	7·2	1·6
U. S. A.	26·1	10·8	
India	38·3	13·5	3·3
Japan	35·4	13·5	2·8

LIVELIHOOD PATTERN

Livelihood Pattern—Out of 3,566 lakhs of population (the records of about 3 lakhs were accidently destroyed), 2,143 lakhs or 60·1 p.c. have been classified as 'non-earning dependents'—they do not take any part in procuring their own livelihood. In the main, they consist of women and children who are supported by the husband and father or other bread-winner of the household. Altogether 379 lakhs of people or 10·6 p.c. of the total are earning dependents. They are dependents in the sense that—left to themselves—they cannot support themselves. They are also, in the main, women and grown-up children and 1,044 lakhs or 29·3 p.c. are self-supporting i.e. he or she produces income at least sufficient for his or her own maintenance. 68·1 p.c. of the 1,044 lakhs of self-supporting persons are agriculturists and 31·9 p.c. are non-agriculturists.

EXPECTATION OF LIFE

Expectation years of Life—In 1921-30, the expectation of life at birth in India was 26 years 11 months; in 1941-51 it was 32 years 5 months. The expectation of life at 10 in India in 1921-30 was 36 years 5 months and in 1941-50 39 years. The comparable figure at age 10 is 59 to 60 in England and Wales, Australia and New Zealand, 56 in the U.S.A. about 50 in Japan and 47 in Egypt.

Longivity—The 1951 census shows the drop in the percentage of widows which has been reduced from 16·1 in 1931 to 12·8 in 1951. 5 per cent of males are widowers while 12·8 per cent of the females are widows. There is one widow for every three married women in South India, while the India ratio is nearly one to four. South India (14·3 p.c.), Central India (14·0 p.c.), West India (13·1 p.c.) have more widows than East India (12·1 p.c.), North India (12·0 p.c.), and North-West India (9·8 p.c.), All India p.c. is 12·8.

North India has the highest p.c. of widowers (7·0) and North West India (6·0). Other zones have appreciably lower percentages—Central India 4·9, East India 4·4 and South and West India 4·2 each.

DIVORCED PERSONS

Divorced Persons in India number only 144,786 or 0·4 per cent of the population.

POPULATION BY ZONES

	Persons	Males	Fmales
North India ..	63,215,742	33,098,866	30,116,876
East India ..	90,130,206	46,343,878	43,786,328
South India ..	75,600,804	37,822,542	37,778,262
West India ..	40,661,115	20,982,281	19,678,834
Central India ..	52,267,959	26,497,524	25,770,435
North-West India ..	34,972,597	18,569,728	16,402,869

POPULATION OF INDIA, 1951

States	Area (sq.m.)	Male	Female	Total
PART A.—				
Assam ..	85,012	4,812,166	4,231,541	9,043,707
Bihar ..	70,330	20,223,675	20,002,272	40,225,947
Bombay ..	111,434	18,614,862	17,341,288	35,956,150
Madhya Pradesh ..	130,272	10,662,812	10,584,721	21,247,533
Madras ..	127,790	28,419,003	28,596,999	57,016,002
Orissa ..	60,136	7,242,892	7,403,054	14,645,946
Punjab ..	37,378	6,786,934	5,854,271	12,641,205
Uttar Pradesh ..	113,409	33,098,866	30,116,876	63,215,742
West Bengal ..	30,775	13,345,441	11,464,867	24,810,308
Total ..	766,536	143,206,651	135,595,889	278,802,540
PART B.—				
Hyderabad ..	82,168	9,431,062	9,224,046	18,655,108
Madhya Bharat ..	46,478	4,133,075	3,821,079	7,954,154
Mysore ..	29,489	4,657,409	4,417,563	9,074,972
PEPSU ..	,10,078	1,894,844	1,598,841	3,493,685
Rajasthan ..	130,207	7,961,673	7,329,124	15,290,797
Saurashtra ..	21,451	2,094,442	2,042,917	4,137,359
Travancore-Cochin	9,144	4,620,803	4,659,622	9,280,425
Total ..	329,015	34,793,308	33,093,192	67,886,500
PART C.—				
Ajmer ..	2,417	360,236	333,136	693,372
Bhopal ..	6,378	437,635	398,839	836,474
Bilaspur ..	453	64,738	61,361	126,099
Coorg ..	1,586	125,327	104,078	229,405
Delhi ..	578	986,538	757,534	1,744,072
Himachal Pradesh ..	10,451	414,765	468,602	983,367
Kutch ..	16,724	272,977	294,629	567,606
Manipur ..	8,628	283,685	293,950	577,635
Tripura ..	4,032	335,589	303,440	639,029
Vindhya Pradesh ..	23,603	1,832,940	1,741,750	3,574,690
Total ..	75,350	5,214,430	4,757,319	9,971,749

PART D, etc.—

Andaman & Nicobar Islands ..	3,215	19,055	11,916	30,971
Sikkim ..	2,744	72,210	65,515	137,725
Total ..	5,959	91,265	77,431	168,696

SUMMARY—

Part A ..	766,536	143,206,651	135,595,889	278,802,540
Part B ..	329,015	34,793,308	33,093,192	67,886,500
Part C ..	75,350	5,214,430	4,757,319	9,971,749
Part D, etc. ..	5,959	91,265	77,431	168,696
Total ..	1,176,860	183,305,654	173,523,831	356,829,485

Part B State of Jammu and Kashmir and Part B Tribal Areas of Assam were not included in the 1951 Census. The area of Jammu and Kashmir is 92,780 square miles ; 1941 Census Population was 4·02 millions and the Statutory Estimates of the Registrar General as on 1st March, 1950 and 1951 were 4·37 and 4·41 million respectively. A local estimate of population of Part B Tribal Areas of Assam in 560,631 persons.

POPULATION ACCORDING TO LIVELIHOOD CATEGORIES

Livelihood categories	*Male*	*Female*	*Total*
I Agricultural ..	126,205,686	122,916,763	249,122,449
(a) Cultivators of land wholly or mainly owned and the dependents	85,115,449	82,231,052	167,346,501
(b) Cultivators of land wholly or mainly unowned and their dependent	16,256,195	15,383,224	31,639,719
(c) Cultivating labourers & their dependents ..	22,395,852	22,416,076	44,811,928
(d) Non-cultivating owners of land, agricultural rent receivers and their dependents	2,438,190	2,886,111	5,324,301
II Non-Agricultural ..	57,028,733	50,543,207	107,571,940
(a) Production other than cultivation ..	20,024,164	17,636,033	37,660,197
(b) Commerce ..	11,232,253	10,076,618	21,308,871
(c) Transport ..	3,114,358	2,505,770	5,620,128
(d) other service & miscellaneous sources	22,657,958	20,324,786	42,982,744
Total Pop. (*Agricultural & non-agricultural*) ..	183,234,419	173,459,970	356,694,389

PERCENTAGE OF LITERACY IN RESPECT OF TOTAL POPULATION, MALES, FEMALES OF EACH STATE, 1951

States	*Persons*	*Males*	***Females***
Uttar Pradesh	10·8	17·4	3·6
Bihar	12·2	20·6	3·7
Orissa	15·8	27·3	4·5
West Bengal	24·5	34·7	12·7
Chandernagore	42·3	52·5	29·1
Assam	18·1	27·1	7·8
Manipur	11·4	20·8	2·4
Tripura	15·5	22·3	8·0
Sikkim	7·3	12·8	1·3
Madras	19·3	28·6	10·0
Mysore	20·3	30·0	10·2
Travancore-Cochin	46·4	55·2	37·7
Coorg	27·2	34·0	19·0
Bombay	24·6	35·5	12·9
Saurashtra	18·5	26·3	10·5
Kutch	17·1	24·4	10·2
Madhya Pradesh	13·5	21·9	5·0
Madhya Bharat	10·8	17·4	3·7
Hyderabad	9·2	15·1	3·0
Bhopal	8·2	12·3	3·9
Vindhya Pradesh	6·1	10·9	1·1
Rajasthan	8·4	13·7	2·6
Punjab	16·1	22·0	9·4
PEPSU	12·0	17·7	5·2
Ajmer	20·1	29·1	10·3
Delhi	38·4	43·0	32·3
H. Pradesh & Bilaspur	7·7	12·6	2·4
Andaman & Nicobar Islands	25·8	34·2	12·3
INDIA	16·6	24·9	7·9

DENSITY OF POPULATION PER SQUARE MILE

Zones and States.	*Number of persons per sq. mile*
INDIA	312
I. *North India*	557
Uttar Pradesh	557
II. *East India*	395
1. Bihar	572
2. Orissa	244
3. West Bengal	806
4. Assam	176
5. Manipur	67
6. Tripura	158
7. Sikkim	50
III. *South India*	450
1. Madras	446
2. Mysore	308
3. Travancore-Cochin	1015
4. Coorg	145
IV. *West India*	272
1. Bombay	323
2. Saurashtra	193
3. Kutch	34
V. *Central India*	181
1. Madhya Pradesh	163

2. Madhya Bharat ..	171
3. Hyderabad ..	227
4. Bhopal ..	122
5. Vindhya Pradesh ..	151
VI. *North West India* ..	183
1. Rajasthan ..	117
2. Punjab ..	338
3. Pepsu ..	347
4. Jammu & Kashmir	—
5. Ajmer .	287
6. Delhi ..	3017
7. Bilaspur ..	278
8. Himachal Pradesh	94
Andaman and Nicobar ..	10

POPULATION OF STATES BY RELIGION

India

Hindus ..	203,186,986
Sikhas ..	6,219,134
Jains ..	1,618,406
Buddhists ..	180,767
Zorostrians ..	111,791
Muslims ..	35,400,117
Christians ..	8,157,765
Jews ..	26,781
Tribal Religions ..	1,661,897
Non-Tribal Religions	47,148

Bombay

Hindus ..	31,785,614
Muslims ..	2,906,887
Jains ..	572,093
Christians ..	525,454
Zoroastrians ..	97,573
Sikhs ..	37,017
Jews ..	20,135
Buddhists ..	2,395
Non-Tribal ..	8,982
	35, 956,150

Manipur

Hindus ..	347,325
Sikhs ..	50
Jains ..	150
Buddhists ..	33
Zoroastrians ..	1
Muslims ..	37,197
Christians ..	68,394
Tribal ..	124,485

Uttar Pradesh

Hindus ..	53,762,925
Sikhs ..	197,612
Jains ..	97,744
Buddhists ..	3,221
Zorastrians ..	1,258
Muslims ..	9,028,992
Christians ..	123,876
Jews ..	34
Non-Tribal Religion	80

Madhya Bharat

Hindus ..	7,333,021
Sikhs ..	12,521
Jains ..	100,234
Zoroastrians ..	934
Muslims ..	496,153
Christians ..	10,947
Buddhists ..	219
Jews ..	125

Tripura

Hindus ..	480,662
Sikhs ..	35
Jains ..	36
Buddhists ..	15,403
Zoroastrians ..	1
Muslims ..	136,940
Christians ..	5,262
Tribal ..	690

Orissa

Hindus ..	14,318,411
Muslims ..	176,338
Christians ..	141,934
Sikhs ..	4,163
Jains ..	1,248
Jews ..	72
Buddhists ..	969
Zoroastrians ..	181
Tribal ..	2,576
Non-tribal ..	54

Bhopal

Hindus ..	700,381
Sikhs ..	562
Jains ..	5,985

Zoroastrians	55
Muslims	128,672
Christians	812
Buddhists	7

Sikkim

Hindus	97,863
Sikhs	18
Jains	19
Buddhists	39,397
Muslims	124
Christians	304

West Bengal

Hindus	19,462,706
Sikhs	29,864
Jains	19,116
Buddhists	81,576
Zoroastrians	1,918
Muslims	4,925,496
Christians	175,021
Jews	2,619
Tribal Religions	109,294
Non-Tribal	2,698

Vindhya Pradesh

Hindus	34,85,083
Sikhs	529
Jains	11,835
Buddhists	7
Zoroastrians	13
Muslims	76,126
Christians	1,092
Jews	5

Chandernagore

Hindus	47,954
Sikhs	3
Buddhists	13
Muslims	1,667
Christians	272

Assam

Hindus	5,894,733
Muslims	1,996,456
Christians	585,399
Sikhs	4,107
Jains	4,245
Buddhists	22,675

Zoroastrians	27
Jews	209
Tribal	527,712
Non-Tribal	8,144

Bihar

Hindus	34,316,416
Sikhs	38,703
Jains	8,656
Buddhists	1,168
Zoroastrians	455
Muslims	4,564,466
Christians	422,030
Jews	92
Tribal	871,434
Non-Tribal	2,527

Madras

Hindus	49,995,318
Sikhs	2,859
Jains	35,778
Buddhists	1,375
Zoroastrians	2,087
Muslims	4,538,136
Christians	2,431,006
Jews	474
Non-Tribal	8,969

Mysore

Hindus	8,177,291
Sikhs	3,247
Jains	22,936
Buddhists	1,125
Zoroastrians	470
Muslims	698,831
Christians	170,,909
Jews	162
Non-Tribal	1

Madhya Pradesh

Hindus	20,215,607
Sikhs	33,396
Jains	96,251
Buddhists	2,841
Zoroastrians	3,066
Muslims	800,781
Christians	88,802
Jews	228
Tribal	1,183
Non-Tribal	5,378

PEPSU

Hindu	1,704,349
Sikhs	1,721,935
Jains	7,578
Buddhists	219
Zoroastrians	98
Muslims	55,913
Christians	3,565
Jews	9
Non-Tribal	19

Travancore-Cochin

Hindus	5,587,852
Sikhs	275
Jains	354
Buddhists	40
Zoroastrians	38
Muslims	721,227
Christians	2,968,030
Jews	2,288
Non-Tribal	321

Hyderabad

Hindus	16,088,905
Sikhs	8,449
Jains	30,287
Buddhists	145
Zoroastrians	1,992
Muslims	2,206,182
Christians	290,973
Jews	16
Tribal	24,503
Non-Tribal	3,656

Delhi

Hindus	1,467,854
Sikhs	137,096
Jains	20,174
Buddhists	503
Zoroastrians	164
Muslims	99,501
Christians	18,685
Jews	90
Non-Tribal	5

Coorg

Hindus	199,465
Sikhs	9
Jains	54
Buddhists	16
Zoroastrians	10
Muslims	23,062
Christians	6,788
Non-Tribal	1

Rajasthan

Hindus	13,862,150
Sikhs	144,233
Jains	327,763
Buddhists	41
Zoroastrians	500
Muslims	949,348
Christians	6,762

Ajmer

Hindus	599,524
Sikhs	3,964
Jains	32,004
Buddhists	4,319
Zoroastrians	262
Muslims	48,886

Saurashtra

Hindus	3,587,884
Sikhs	881
Jains	123,916
Buddhists	13
Zoroastrians	560
Muslims	422,186
Christrians	1,814
Jews	150
Non-Tribal	36

Punjab

Hindus	8,176,430
Sikhs	3,831,983
Jains	37,518
Buddhists	1,441
Zoroastrians	77
Muslims	229,080
Christians	95,293
Jews	150
Non-Tribal	631
Persons whose enumeration records were destroyed by fire	268,602

Andaman & Nicobar Island

Hindus	..	9,294
Sikhs	..	125
Jains	..	1
Buddhists	..	1,604
Zoroastrians	..	2
Muslims	..	4,783
Christians	..	9,494
Jews	..	1
Tribal	..	20
Non-Tribal	..	5,646

Kutch

Hindus	..	393,128
Sikh	..	478
Jains	..	62,397
Zoroastrians	..	49
Muslims	..	111,434
Christrians	..	117
Jews	..	3

Himachal Pradesh & Bilaspur

Hindus	..	1,088,841
Sikhs	..	5,019
Jains	..	34
Buddhist	..	2
Muslims	..	15,253
Christians	..	317

PUBLIC HEALTH & HYGIENE

Public Health Administration—The public health administration is mainly a state subject, but Central Ministry of Health exercises sole executive powers in regard to subjects in the Union List and concurrent powers in relation to the subjects in the Concurrent List. So far as the States are concerned, the functions of the Ministry of Health is purely advisory and one of coordination. Besides, it supplies them with vital information on medical subjects and offers competent advice and such other assistance as it can give for the promotion of health and well-being in the country. The Central Ministry of Health maintains liaison between the States on the one hand and foreign countries and international health organisations on the other.

Before 1947 the medical and health services were administered by two separate departments, but soon after attainment of independence, the offices of the Director General of Indian Medical Services and the Commissioner of Public Health were merged in the Directorate General of Health Services. The example has been followed by almost all the States except Madras.

Ministry of Health—With the advent of independence, a Ministry of Health has been established at the Centre. This Ministry is directly responsible for the health of the Centrally Administered Areas. The States are autonomous in respect of medical relief and public health. The Centre however advises the States and keeps in close touch with them in their endeavours to build up the health of the people committed to their charge.

In wider aspect the functions of the Central Ministry of Health may be summarised as follows :—

(1) To be responsible for international health relations and the administration of port quarantine.

(2) To administer the central health institutions—the All-India Institute of Hygiene and Public Health, the Malaria Institute, the

Central Research Institute, the Serologist's Laboratory, the Central Drugs Laboratory, and such other Central Health Institutions as may be created from time to time.

(3) To promote research through the Indian Council of Medical Research and other bodies.

(4) To promote in consultation with State Governments the regulation and development of the medical, pharmaceutical and dental and nursing professions.

(5) To promote, in consultation with State Governments, the establishment and maintenance of drug standards.

(6) To lay down and enforce appropriate standards of medical, dental, nursing, pharmaceutical and other ancillary branches of Health Education.

(7) To collect information regarding developments in the medical sciences and in health administration in India and elsewhere and to make such information available to State Governments and their Medical and Health Departments.

(8) To promote through a Central Health Board and otherwise discussions and exchange of information on health problems.

(9) To promote through a Central Health Board and otherwise special inquiries into particular health problems and co-ordination of effort thereon.

(10) To collect and give publicity to statistical and other information relating to health problems with the object of stimulating the interest of and educating both the professional and lay public on health matters.

(11) To discharge the functions of the State Government in Health and Local Government matters in the Centrally-administered areas.

(12) To build up and maintain a Central Health Service for the purpose of (*a*) ensuring high standards of administration at the Centre, (*b*) collaborating with the States for the maintenance of an equally efficient standard in their administration, (*c*) making available to the Centre and the States the services of highly qualified personnel for teaching, research and medical institutes.

Problem of Public Health in India—The Planning Commission has stated that "the incidence of sickness, the existence of disability, the death rate, the expectation of life at various ages and the relation of the active population to the total, determine the qualitative and quantitative use that can be made of the available manpower." It has been estimated that at least 100 million persons in the whole of India suffer from malaria every year; the annual mortality on this account is probably of the order of 1—1½ million in India. It is estimated that about 2½ million active cases of tuberculosis exist annually and that ½ million deaths take place each year from this cause alone. The common infectious diseases, cholera, small-pox and plague are also responsible for a large amount of mortality. Among the countries for which statistics are available, India ranks high as one of the largest reservoirs of infection in respect of all three. Malnutrition and undernutrition reduce the vitality and power of resistance of an appreciable section of the population. The food consumed is insufficient to provide the necessary energy requirements in the case of 30 per cent of families, and the diet is almost invariably ill-balanced and there are in terms of food factors a deficiency, of fats, vitamins and proteins of high biological value. Widespread adulteration of foodstuffs is doing insidious harm to the health of the people. Water-supply is totally inadequate. Health Survey & Development Committee concluded in 1946 that only 6 per cent of the towns in India had protected water supply which served 6·15 p.c. of the total population.

Medical Education—The medical colleges were first opened in Madras and Calcutta in 1835 and recognised by the Royal College of Surgeons in 1845. Since then there has been gradual progress of medical education in India. Practically all medical colleges offer a Doctorate of Medicine, Master of Surgery, etc. Several of the colleges are offering D.P.H. or equivalent. There is also a special provision for military medical students of the Indian Medical Department. On the recommendation of the Inter-University Board, an All-India Council of Post-Graduate medical education has been set up. The Council will prescribe standards for post-graduate medical education in the universities, and advise them in order to secure uniformity of standards throughout the country.

Boards, Associations, Councils etc., for All-India Public Health—We give below a list of boards, associations, councils etc. of Public Health for all India mostly under Government auspices—

Central Advisory Board of Health—was started in 1937, in which all State Governments are associated. It provides a forum for the purpose of discussing and formulating of public health policy and also to ensure co-operation between the Centre and the States and between State and State.

Indian Nursing Council—was inaugurated at Delhi on May 19, 1949. One of the main functions of the Council is to lay down minimum standards for the training of nurses. The Indian Nursing Council has been vested with the power to inspect training institutions and examination. The efforts of the Council is directed towards attaining a uniformly higher standard than that which exists today.

Indian Medical Association—This is an all-India organization of medical practitioners of India founded in 1928-29 for the purpose of looking after the interest of medical education, public health and the medical profession in India.

Medical Store Depots and Factories—There are at present four main medical depots in Madras, Bombay, Calcutta and Karnal, Factories are attached to the first two depots. The Depots and Factories are running on a commercial basis and are self-financing.

Medical Council of India—was constituted in 1933 along the lines of General Medical Council of Great Britain. The Council tries to maintain uniform minimum standard of university medical qualifications for India proper and tries to arrange for reciprocal recognition in India proper of approved qualifications but it has no disciplinary power.

Health Publicity Bureau—has been established according to the

Bhore Committee's recommendations with a view to disseminating useful information on health in a popular way to make the people health-minded.

Drugs Control and Drugs Technical Board—Under the Drugs Act of 1942, the Central Government constituted the Drugs Technical Board in 1942. Its functions are to advise the Central and Provincial Governments on technical matters arising out of the administration of the Act.

The enforcement of the control over manufacture, distribution and sale of drugs in the States is the concern of the State Governments. The Central Government is responsible for control over standard of drugs imported into India and over the manufacture, distribution and sale of drugs in the Centrally-administered areas.

Indian Research Fund Association—The Association is subsidised by the Government of India and was founded in the year 1911 for the purpose of conducting research in medicine and allied subjects. It is managed by a Governing Body whose members are appointed by the Government of India. The research conducted by the Association covers a wide field such as malaria, cholera, leprosy, filariasis, nutrition, industrial health, maternity and child welfare, clinical research etc. The Association has a number of Advisory Committees and grants annually 15 fellowships for research work, both medical and non-medical. The fellowship carries a stipend of Rs. 250 per month tenable for two years.

Provincial Medical Councils—began to function from 1942 when the first Provincial Medical Council was started in Bombay. It is now functioning in all the States. The Provincial Councils keep register of qualified practitioners and supervise medical education and inspect examinations and exercise disciplinary powers over medical practitioners, and also advise local governments in regard to recognition of various medical qualifications.

Dental Council of India—was inaugurated on May 14, 1949 for the development of dental training and practice of the profession through the establishment of the Dental Councils at the Centre and in the States, for the organization of dental services for the people in urban and rural areas.

All-India Council of Post-Graduate Medical Education—has been constituted for four years. It will prescribe standards for post-graduate medical education in the universities and offer suggestions to evolve uniformity of standards throughout the country.

Pharmacy Council of India—was inaugurated at Delhi on May 10, 1949 under the Pharmacy Act of 1948. The inauguration of the Pharmacy Council marks a definite and important step in the campaign for the regulation of the quality and purity of drugs made available to the people of this country.

Voluntary Organisations—The following are the important voluntary organisations associated with local activities—(1) *Indian Red Cross Society*, (2) *St. John's Ambulance Association*, (3) *British Empire Leprosy Relief Association*, (4) *Mission of Lepers*, (5) *Association for the Prevention of Blindness, Bengal*, (6) *Tuber-*

culosis Association of India, (7) *International Health Division of the Rockefeller Foundation in India.*

Anti-Tuberculosis—In 1937 a movement was started against Tuberculosis which was assuming an alarming proportion every year. Tuberculosis Association of India was formed to which all provincial associations are affiliated. Government have also started a B.C.G. vaccination campaign with the assistance of ITO, W.H.O. and UNICEF. Central B.C.G. Organisation has been created to direct B.C.G. vaccination campaign. The Government of India have already started manufacturing B.C.G. Vaccine Laboratory at Guindy.

India and the International Assistance—India is a member of the World Health Organisation. India has been receiving striking assistance from the World Health Organisation and U. N. International Children's Emergency Fund. Help from these organisations generally takes the form of expert advice for improving existing services, medical literature, fellowships and equipment. They have done much to control and cure tuberculosis, venereal diseases, malaria and improve child health in this country. Help in the form of equipment and technical assistance has also been received for the manufacture of anti-biotics, such as B.C.G. Vaccine, penicillin etc. The projects of W.H.O. includes—B.C.G. campaign, cholera research, plague research, maternal and child health project, awarding of fellowships on various medical and public health subjects to Indian personnel.

Drugs and Medicines—The Drugs Act of 1940 was brought into operation in April 1940 to provide machinery for drug control. Under the guidance of the Central Government all part A States have adopted uniform rules under Drugs Act. The Government have taken steps to ensure that the medicines are of declared standard, to liberalize imports and to encourage the indigenous manufacture of drugs. Concerning the production of drugs, the Government of India have launched a scheme for the production of *penicillin* and the Government of Bombay for the production of D.D.T. The Government of West Bengal and Madras own cinchona plantations. The Haffkine Institute in Bombay is commercially manufacturing sulphathiozol. The Central Drug Institute is engaged in research on many things including medicinal plants used in Ayurvedic and Unani system.

Doctors & Nurses and Hospitals in India—There are in all some 50,000 doctors spread over India. This gives a doctor population ratio of one doctor to 8,000 of population. In United Kingdom the ratio is slightly under 1 to 1,000 and in U.S.A. 1 to 750 to 800 of population. There are approximately 7,000 trained nurses in India, with a nurse population ratio of 1 to 56,000. In United Kingdom, the ratio is 1 nurse to 300 of population and in U. S. A. it is higher. There are approximately 5,000 trained midwives in India bearing a midwife population ratio of 1 to 80,000 or 1 midwife to 316 sq. miles on a basis of 1 midwife per 100 births where 100,000 are required.

It is estimated that there are actually in existence between 73,000 to 74,000 hospital beds of all kinds in India or a ratio of 0·24 beds per 1,000 of population. It is however estimated that in order to provide satisfactory medical service, 7 hospital beds per 1,000 of population are required which would mean provision in the sub-continent of 2,800,000 beds.

Ten Years Health Plan—All-India Health Survey and Development Committee (Chairman, Sir Joseph Bhore) announced on Dec. 25, 1945 a comprehensive ten-year national health plan for India costing Rs. 1,000 crores.

The scheme which takes the village as the nucleus for health organisation, provides for :—

1. Primary centres in every village with a dispensary containing 5 beds. Each group of villages with a population of 20,000 to be in charge of a trained doctor with a woman doctor as well as a staff of 34. Each group of three primary centres to have 30 bed hospital; in addition there will be 2 doctors, 2 public health nurses, and 4 midwives at the villagers' homes. Each primary unit is to have a health committee.
2. Secondary centres for a population of 50,000—60,000 with specialist staff and hospital and laboratory facilities of a higher than those in the primary centres, whose work they will supervise.
3. District centres with a still higher type of health organisation, each district hospital having 200 beds and being able to provide medical and surgical aid of a high order.

Provincial Health Departments, while supervising in general the health services of each province, are to interfere as little as possible with primary and secondary organisations and to encourage them to act independently and display initiative in tackling their problems.

The estimated capital expenditure is Rs. 163 crores in first five years and Rs. 200 crores during second five years, with a recurring annual expenditure of Rs. 40 crores during first half and Rs. 81 crores during second half of the programme.

Five Year Plan—The programme with the following provisions now forms the basis of the Five Year Plan—

(1) Provision of water supply and sanitation.
(2) Control of malaria.
(3) Preventive health care of the rural population through health units and mobile units.
(4) Health services for mothers and children.
(5) Health education and training.
(6) Self-sufficiency in drugs and equipment.
(7) Family planning and population control.

This will involve for Central and State Governments an outlay of Rs. 99·55 crores of which Centre's shares is Rs. 17·87 crores.

LABORATORIES, MEDICAL RESEACHES & ASSOCIATIONS

Indian Research Fund Association (1911)—Is the leading organisation in India concerned with medical research. It is supervised by Advisory Committees. These committees deal with malaria, cholera, plague, malarial mortality and nutrition. The Association approves an annual programme of research, sanctions grants-in-aid for research and in certain cases may constitute special enquiries.

Central Research Institute, Kasauli (1906)—Manufactures vaccine such as anti-typhoid, anti-cholera and anti-venom serums for Civil and Military requirements, also well-known for its research on major epidemics and also endemic diseases. The Institute serves as a centre of reference for anti-rabic treatment. A Rabies Research Centre is being opened here and also a new Anaerobic block has been constructed.

All India Institute of Hygiene and Public Health, Calcutta—Established in 1932 with the aid of an endowment from Rockefeller Foundation which provides the scheme with the present building and its initial equipment. The Government of India allow a grant of Rs. 3,00,000 per year. The object of the Institute—(1) the training of public health personnel, qualifying students for public health diploma and (2) pursuits of research on several aspects of public health including study of diseases like malaria, etc.

All India Medical Institute, Delhi—This institute is to be started at Delhi which will serve as a model training and research institution and it should provide best possible training for the teachers and research workers of the future.

Tuberculosis Institute, Delhi—Ministry of Health has started a Tuberculosis Institute at Delhi under the aegis of the Delhi University providing a centre for the tuberculosis research. *Tuberculosis Association of India* with its branches in the States, is the premier organisation which is concerned with the co-ordination of voluntary effect in this field.

Central Drugs Laboratory, Calcutta—The Biochemical Standardisation Laboratory, Calcutta was converted into Central Drugs Laboratory in 1947 to take up the registration of patent or proprietory medicines under Drugs Act and to analyse samples in case of disputes over standards of products sold or imported into the country.

Pharmacognosy Laboratory which was established in 1948 for pharmacognostic testing in connection with the enforcement of Drugs Act has been merged with Central Drugs Laboratory and now forms the pharmacognosy section of the main laboratory.

School of Tropical Medicine, Calcutta (1932)—The School and the Carmichael Hospital for Tropical Diseases which are primarily a research hospital attached to the school are of the status of a provincial institution under the Government of West Bengal, but actually both have an all-India aspect. It has the following departments:—(1) Tropical Medicines, (2) Bacteriology and Pathology, (3) Protozoology, (4) Entomology, (5) Pharmacology, (6) Chemistry, (7) Anaemia and respiratory diseases department, (8) Helminthology, and (9) Public Health Laboratory Practice.

Haffkine Institute, Bombay (1900)—The Institute acts as a centre for the manufacture of plague vaccine for the whole of India and centre for the manufacture of anti-rabic vaccine for Bombay Presidency.

King Institute of Preventive Medicine, Guindy, Madras (1903-4)—for manufacture of vaccines, therapeutic sera, vaccine lymph, blood bank etc., and also research work.

Pasteur Institute of India, Kasauli—Centre of anti-rabic treatment.

Pasteur Institute of Southern India (1907), Coonoor.

King Edward VII Memorial Pasteur Institute and Medical Research Institute (1907), Shillong.

Pasteur Institute, Calcutta—This institute is a part of School of Tropical Medicine.

Pasteur Institute, Bombay—This is a part of Haffkine Institute, Bombay.

Serological Laboratory—is controlled by the Centre.

All-India Malaria Institute of India, Delhi (1939)—Carries mainly malaria research in India and co-ordinates to a large extent the anti-malarial operations conducted by Central and State Governments.

Verus Research Centre, Poona—was opened in 1952 to undertake investigations into various diseases peculiar to India and to train workers in the field of verus research. The centre is a joint effort of the Indian Council of Medical Research and the Rockefeller Foundation.

Imperial Veterinary Research Institute, Mukteswar—Started in 1893. It is now a fully equipped research institute for veterinary research. It also manufactures protective sera and vaccines. It has a branch station at Izzatnagar (Bareilly).

Nutrition Research Laboratories, Coonoor—Conducts research on problem of nutrition and acts advisory bureau on all questions for nutrition.

Central Institute of Research in Indigenous Systems of Medicine—Jamnagar—To be started shortly for which the Government of India have made grants.

Sir Tata School of Social Service, Bombay—The only institution in India which provides facilities for the training of social workers in the fields of family and welfare, adult delinquency and industrial and labour problems.

Sir Dorabji Tata Trust—The Trust has established in 1940 Tata Memorial Hospital for cancer at a capital of Rs. 23 lakhs and maintained at an average annual cost of Rs. 4 lakhs. There is also Tata Graduate School of Social Work which trains young men and women from universities in social work. It is the first institution of its kind in India.

MEDICAL COLLEGES

Agra University

G. R. Medical College, Gwalior.
Mahatma Gandhi Memorial Medical College, Indore.
S. N. Medical College, Agra.

Andhra University.

Andhra Medical College, Visakhapatnam.
Medical College, Guntur. Pre-registration and Pre-clinical course.

Baroda University.
- Faculty of Medicine M.B.B.S.

Bihar University.
- Medical College, Darbhanga.

Bombay University.
- Grant Medical College, Bombay.
- Seth G. S. Medical College, Parel, Bombay.
- Topiwalor National Medical College, Bombay-8.

Calcutta University.
- Medical College, Calcutta.
- Nilratan Sarkar Medical College, Calcutta.
- R. G. Kar Medical College, Belgachia, Calcutta.
- National Medical Institute, Gorachand Rd., Calcutta.

Delhi University.
- Lady Hardinge Medical College, New Delhi.

Gauhati University.
- Assam Medical College, Dibrugarh.

Gujarat University.
- B. J. Medical College, Ahmedabad.

Lucknow University.
- Dept. of Medicine (M.B.B.S.) —11 Depts.

Madras University.
- Madras Medical College, Madras.
- Stanley Medical College, G. T. Madras.
- Christian Medical College, Vellore.

Mysore University.
- Medical College, Mysore.

Nagpur University.
- Medical College, Nagpur.

Osmania University.
- Osmania Medical College, Hyderabad.

Punjab University.
- Medical College, Amritsar.
- Christian Medical College, Ludhiana.

Patna University.
- P. W. Medical College, Patna.

Poona University.
- B. J. Medical College, Poona.

Rajputana University.
- Sawai Man Singh Medical College, Jaipur.

Travancore University.
- Medical College, Trivandum.

Utkal University.
- Sri Ramchandra Bhanja Medical College, Cuttack.

VETERINARY COLLEGES.

Agra University.
- College of Veterinary Science and Animal, Husbandry, Mathura (B. V. Sc. & A. H.)

Bombay University.
- Bombay Vet. College, Bombay B.Sc.(V.).

Bihar University.
- Bihar Veterinary College, Patna—B.V.Sc. & H.H.

Gauhati University.
- Assam Veterinary College, Gauhati—B.V.Sc.

Madras University.
- Madras Veterinary College, Madras—B. V. Sc.

Osmania University.
- Univ. College of Veterinary & Animal, Husbandry, Hyderabad—B.V.Sc.

Punjab University.
- Punjab Veterinary College, Hissatri—B.V.Sc.

Saugor University.
- M. P. Vidarbh Veterinary College, Jabbalpur—B.V.Sc.

Not affiliated to Universities.
- Bengal Vet. College, Belgachia, Cal. (1) G.V.Sc., (2) Certificate in Vet. Dispensing, Farrierss and Dressiers, Poultry and Riding.
- Ind. Vet. Research Institute, Izatnagar—Associateship of I.V.R.I.
- Ind. Vet. Research Institute, Mukteshwar — Associateship of I.V.R.I.

DENTAL COLLEGES.

Bombay University.

Sir Currimbhoy Ebrahim Dental College, Bombay—B.D.S.

Calcutta University.

Calcutta Dental College—B.D.S.

Lucknow University.

Department of Dentistry—B.D.S.

Not affiliated to Universities.

Nair Hospital & Dental College, Bombay—L.D.S., C.D.S.

TUBERCULOSIS DEATH

(Per 100,000 population)

(*From Indian Medical Gazette, October, 1941*)

London ..	96	Berlin ..	120	Madras ..	290
Paris ..	177	Kanpur ..	432	Bombay ..	140
Mexico ..	170	Lucknow ..	419	Calcutta ..	230
New York	128				

	Births in India		Deaths in India	
	Births (total) (in thousands)	*birth rate per 1000 population*	*Total Death (in thousands)*	*death rate per 1000 population*
1938 ..	9,398	33·3	6,685	23·7
1948 ..	6,196	25·2	4,168	17·0
1949 ..	6,762	26·4	4,044	15·8
1950 ..	6,728	24·8	4,333	16·0

Infant Deaths

(per 1000 live births)

1938 ..	167	1942 ..	163	1946 ..	136
1939 ..	136	1943 ..	165	1947 ..	146
1940 ..	160	1944 ..	169	1948 ..	130
1941 ..	158	1945 ..	151	1949 ..	123
				1950 ..	127

(*Monthly Abstract of Statistics, July,* 1953).

BROADCASTING IN INDIA

Early History—The first development of Radio in India began with a Radio Club at Madras in 1924, but regular service was inaugurated by the Indian Broadcasting Company when the first station was opened in Bombay on July 23, 1927 and Calcutta station was opened on August 26, 1927. Before these dates a number of low power stations in various parts of India were working. Financial difficulties overpowered the company and it went into liquidation in March 1930.

But there was an universal demand that broadcasting should continue in India without any interruption. As a result of various representations, Government decided to take over the radio as an experimental measure. With effect from 1st April, 1930, it was placed under the direct control of the Government of India in the Department of Industries and Labour under the designation of *'Indian State Broadcasting Service.'*

But the position of broadcasting in India did not improve. The Government again decided to close down the service as it was being run at a considerable loss. The decision to close down was announced on the 9th October, 1931. The announcement caused considerable agitation everywhere. It became however clear that new sources of revenue had to be found out if broadcasting was to continue in India. It was decided customs receipts should be increased. So Broadcasting in India started again as a state monopoly under the name of *All India Radio* in 1936.

Since then there has been steady progress. Today All India Radio is a vast organization under the Director-General of Broadcasting with a net work of regional stations all over India. Each station is under a Station Director. A.I.R. has now at its command a most powerful battery of transmitters capable of covering, at least four continents direct. Even in its present set-up, A.I.R. is Asia's biggest institution of its kind.

Since 15th August, 1947, the number of radio stations has increased from six to twenty two including the stations taken over from the integrated states.

A.I.R. net-work now consists of 22 stations and four auxiliary units. The rate of increase of licences is now between 10,000 to 11,000 per month.

The drawback of the A.I.R.—But inspite of the vast progress of A.I.R. today, after 17 years, A.I.R's voice does not reach even one person out of a hundred. There are less than 700,000 wireless licence holders and considering there may be four listeners to each receiver, the total listening audience does not exceed 3 million. The general complaint is that people do not buy radio sets. The answer is—They do not buy them because they cannot afford to buy expensive commodity. There is no attempt on the part of the Government to produce cheap sets in India for common people.

Organisation—Broadcasting is now a central subject under the Constitution and the A.I.R. is a wing of the Department of Information and Broadcasting of the Government of India. It is under the Minister of Information and Broadcasting. The Minister is advised by Standing Committee of ten members elected by the Parliament. The head of the organisation is the Director-General, A.I.R. who is assisted by two Dy. Directors General. Above the Director-General is the Secretary of the Department of Information and Broadcasting who is responsible to the Minister-in-charge. Director-General is assisted by four Deputy Director-Generals. On the engineering side, at the head of the organisation is the Chief Engineer at New Delhi. Each station has its own Station Engineer.

Promotion of Hindi—The new Constitution brought with it important changes in the policy as well as size of the organisation. This choice of Hindi as national language is reflected in A.I.R. programes in a number of ways. The volume and variety of broadcasts in Hindi from stations located in the predominently Hindi areas were increased by modifying the linguistic composition of their programmes. In December, 1950 stations in the non-Hindi area inaugurated popular courses of lessons in Hindi in their respective regional languages. News bulletins in Hindi are also broadcast from stations in non-Hindi areas. A Hindi Advisory Committee has been set up to achieve uniformity in the language and development of vocabulary in Hindi. Well-known Hindi scholars has been appointed to A.I.R. in Hindi-speaking areas.

Revenue—The sources of revenue are customs duty on wireless apparatus, license fees and subscription and advertisement revenues from radio journals. There is an annual licence fee of Rs. 15 per each domestic receiver which is the main source of income. The licenses are issued by the Posts and Telegraphs Department. The traders in wireless apparatus have to take out special import licenses. The A.I.R. has a limited budget of about 2 crores and 40 lakhs per year, of which two crores is recurring.

Journals—Six Radio Programme Journals, i.e., *Indian Listener* (English), *Awaz* (Urdu), *Sarank* (Hindi), *Betar Jagat* (Bengali), *Vanoli* (Tamil) and *Navovani* (Gujerati) and *Vani* (Telugu) are published by the A.I.R.

Names of A.I.R. Stations—Delhi Calcutta, Bombay, Madras, Cuttack, Nagpur, Ahmedabad, Aurangabad, Lucknow, Shillong, Gauhati, Vijayawada, Tiruchirapalli, Patna, Jullundur, Allahabad, Trivandum, Kozikode, Hyderabad, Dharwar, Mysore, Poona.

Varied Broadcasts—Broadcasts are now made in 16 languages including Sanskrit and 12 dialects in the Home Services and in 12 languages, including two dialects of Chinese in external services. A major development was the inauguration of a regular service to Europe in November, 1951. In regard to news services, 77 news bulletins are being put out daily, 47 for listeners at home and 30 for listeners abroad.

All India Radio's output in 1952 increased to 73,976 hours as against 70,695 in 1950.

The details of various broadcasts are given here :—

External Broadcasts—A.I.R.'s external broadcasts go out on a net-work of high power transmitters. The average daily output is approximately 19 hours. The programmes are directed to the countries of South-East Asia, the Far East, the Middle East, Africa, Europe and the West Indies. The languages are: Burmese, Indonesian, Cantonese, Kuoyu, Pushto, Afgan, Persian, Arabic, Swahili, French and English. For Indians overseas programmes are broadcast in Hindi, Tamil and Gujerati. Recordings of Indian music and other programme materials are supplied to various broadcasting organisations for broadcast in their home services. All India Radio also receives from other broadcasting organisations recordings of folk songs, talks, features, etc., which are broadcast in A.I.R.'s services.

Industrial Area Broadcasts—The Calcutta, Bombay, Ahmedabad, Lucknow and Madras stations broadcast special programmes for workers in factories and other establishments. The Calcutta programme is broadcast daily in Bengali and Hindustani and is addressed to the workers. The Bombay programme is broadcast three times a week in Marathi, Gujerati and Hindusthani.

School Broadcasts—are meant to supplement the routine lessons through instructive subjects at schools and not to act as substitute for the teacher. The usual duration of a school broadcast is half-an-hour.

Armed Forces Broadcasts—During the War, Delhi started special programmes in Hindustani for Indian troops in India and abroad. After the war and from 15th August, 1947, the troops programme has been given a new orientation. The programme is now broadcast only for 40 minutes daily in the afternoon.

Farm Forum—is a new broadcast introduced during past four years. The speciality of this is participation of listeners and it deals with subject like talks on compost, manure making and subjects of rural interest.

Radio Reporting—has now become a regular feature of A.I.R. programmes. It covers national festivals, cultural activities and sports.

Rural Broadcasts—In a country like India when vast majority of the people live in rural area, need for specialised programme for rural audiences cannot be over-estimated. So the regional stations of A.I.R. are now devoting a major portion of evening hours to special programmes for villages. The installation and maintenance of radio sets in rural broadcasts is now the responsibility of the State governments. Free radio sets have been installed by State Governments, such as Delhi and Madras for villages. Calcutta and Bombay stations broadcast special programmes for rural listeners.

Radio Debates—A novel experiment in broadcast discussion is now being tried. This is the two way discussion that began in 1949 first arranged with co-operation of BBC in which participants were present in London and Delhi and conversed over a radio link. Few more such two way discussions are being broadcast sometimes inside the A.I.R. net work.

News Broadcasts—News broadcasts are centred in Delhi, each station relaying news bulletins in the language of its, area, apart from the news bulletins in English and Hindi which are treated as national bulletins. A beginning has been made in 1953 with supplementary regional news bulletins from Nagpur and Lucknow, when regional news bulletins went on the air. The object of these bulletins is to give more extensive coverage of regional news to listners in these areas than is possible in the All India National Bulletin broadcasts from Delhi; and it is proposed to start these supplementary regional bulletin from Bombay, Madras and Calcutta in the 1954 financial year. From the Central News Organisation in New Delhi, All India Radio at present is broadcasting 73 news bulletins in 27 languages, 15 Indian and 12 foreign for a total period of about 14 hours 8 minutes per day.

Contact with Public—Contact with Public for keeping programme policy in consonance with the main trends of the public opinion is maintained by the machinery of the *Advisory Committees* of various types. The *Regional Programme Advisory Committees* which function at certain stations include members of the Parliament residing in the respective regions. *Educational Consultive Panels* are attached to the stations at Delhi, Bombay, Calcutta and Madras, while *Language Advisory Committees* are attached to Delhi and Lucknow.

Advisory Committees—There is a regional programme Advisory Committee in all sations. Educational consultive panels are attached to the stations at Delhi, Bombay, Calcutta and Madras, Language Advisory Committees are attached to the stations at New Delhi and Lucknow. Stations at Delhi and Bombay have consultive panels for Indian music. Rural Advisory Committees are attached to the stations at Delhi, Tiruchi, Madras and Vijayawada.

Central Programme Advisory Committee—Recently this Committee has been established to discuss and lay down the general lines of the programmes policy to be followed by AIR.

Five Year Plan—The main features of the Five Year Plan are —(1)Installation of 100 KW SW transmitters, one each at Bombay, Calcutta and Madras (2) Installation of 50 KW MW transmitters, one each at Bombay, Ahmedabad, Calcutta, Jullundur, Allahabad and Bangalore (3) Installation of 10 K.W. transmitters, one each at Nagpur and Gauhati (4) Installation of 10-20 K.W. transmitters at Madras, Hyderabad and Indore (5) Installation of 1 K.W.M.W. transmitters at Poona, Jaipur, Rajkot, Gwalior and Jodhpur (6) construction of up-to-date studio centres at Madras and Calcutta.

Research—In the technical development of broadcasting in India, research plays an important part. AIR has a small research organisation continuously dealing with broadcasting problems, such as acoustics of studios, ionospheric studies and development of new equipment to make broadcasting an efficient service. It is proposed to develope equipment for the objective measurement of atmospheric noise. The Research Division aims at studying the aerial characteristics of transmitting and receiving aerials with a view to finding out best ones for use in our country.

AIR Monitoring Service—A.I.R. monitoring service at Simla keeps a watch on transmissions from all the main broadcasting stations in the world. The service monitors news, commentaries, and selected talks transmitted from these stations in English, Indian languages and in some foreign languages. The service monitors broadcast in 12 different languages from as many as 24 different countries.

A.I.R. Staff Training School—The All-India Radio opened a *Staff Training School* in 1948 for the training of new entrants into the service, both programme and technical as well as of the existing members of the staff. On the *technical side*, trainees receive instruction on the physical properties of the medium as well as on the complicated chain of technical processes between the broadcaster and the listener. On the *programme side*, instruction consists of a series of lectures, demonstrations and practical exercises on every aspect of broadcasting. There is also another section to the school to train engineer apprentices. Here the training is of post-graduate standard and lasts for about six months.

Listener Research Unit—This unit of A.I.R. continuously tries to keep in touch with the news and interests of its listeners. In order to study the trends in listening and the shifts in public taste, contact with listeners is maintained by a system of listening panels, postal enquiries and sample surveys.

Some interesting World Statistics—The U.K. (227) is the second to America (466) with a number of radio sets per 1,000 inhabitants. In many countries such as Pakistan and Iraq the ratio is as low as one set per 1,000 people. Countries with less than 10 sets per 1,000 people include Kenya with two, Jamaica with seven, Equador with nine, Malaya with four and Greece with six. Only four countries in the world are broadcasting regular television programmes. They are the United States (98 transmitters; over 3,700,000 sets; the U.K. (two transmitters; 250,000 sets); Russia (two transmitters; 50,000 sets) and France (two transmitters; 25,000 sets). The totals for television receiving sets are rough estimates.

RADIO LICENCE FEES

1952-53 (gross) Rs. 1,24,77,709.

REVENUE FROM CUSTOMS DUTY

		Rs.			Rs.
1945-46	..	10,44,318	1949-50	..	62,83,092
1946-47	..	72,51,347	1950-51	..	50,48,541
1947-48	..	161,47,463	1951-52	..	92,79,745
1948-49	..	5 51,60,453			

NO. OF SETS AND THEIR VALUE

		Quantity	*Value Rs.*			*Quantity*	*Value Rs.*
1947	..	1,93,065	2,85,69,023	1950	..	19,436	31,57,158
1948	..	61,777	1,11,03,026	1951	..	27,089	44,67,293
1949	..	51,723	89,66,889	1952	..	20,569	41,10,688

BROADCAST RECEIVER LICENCES IN FORCE

(on 31st December, 1952).

	B. R. Licences (Domestic) Rs. 15	*C. B. R. Licences Rs. 50*	*Possession Licences Rs. 15*	*Demonstration Licences Rs. 15*	*Community Licences Rs. 10*	*School Licences Rs. 3*	*Blind Licences Rs. 3*	*Crystal Licences Rs. 3*
Assam ..	7,763	380	117	86	111	6	—	2
Bihar ..	32,129	746	272	141	157	430	1	162
Bombay Circle* ..	1,74,000	9,820	1,923	310	1,182	330	5	145
Central Circle† ..	52,832	3,137	593	264	742	281	3	14
Madras ..	1,10,505	7,883	1,196	581	2,595	880	4	2,800
Orissa ..	5,428	241	72	43	111	64	—	13
Punjab ..	40,120	1,904	359	28	70	277	2	273
U. P. ..	75,702	2,485	652	220	523	218	5	328
West Bengal ..	94,866	2,639	1,062	118	572	218	4	4,915
Hyderabad ..	20,932	1,113	167	38	139	32	1	566
Mysore ..	23,215	1,493	236	77	296	18	—	3
Pepsu ..	9,336	232	55	2	—	26	—	6
Tra-Cochin ..	12,205	806	158	67	87	135	—	33
Corg ..	273	32	5	4	3	5	—	—
Delhi ..	33,995	1,093	468	59	25	50	1	1,785
Himachal Pradesh (including Bilaspur) ..	946	8	2	—	—	1	—	—
Manipur ..	101	8	1	—	—	—	—	—
Tripura‡ ..	212	6	3	1	—	—	—	—
Vindya Pradesh$ ..	—	—	—	—	—	—	—	—
	6,94,560	34,026	7,341	2,039	6,613	2,972	26	11,043

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* Bombay Circle comprises Bombay, Saurashtra and Kutch States.

† Central Circle comprises Madhya Pradesh, Madhya Bharat, Rajasthan, Ajmer, Bhopal and Vindhya Pradesh (Eastern Part).

‡ Tripura includes licences issued in W. E. F. Agency.

$ Included under Uttar Pradesh and Central Circles.

IMPORTANT DATES OF BROADCASTING IN INDIA

1924—First Radio Club in India in Madras on May 16, 1924.
1927—Bombay Station of the Indian Broadcasting Co., opened on July 23, and Calcutta opened on August, 1927.
1930—Indian Broadcasting Co. went into liquidation on March, 1930 and Broadcasting was placed under the direct control of the Government of India and its name was changed to "Indian State Broadcasting Service."
1939—Designation of the Indian State Broadcasting Service changed to "All-India Radio."
1939—In December, first foreign language service opened.
1947—Broadcasting started at Patna (26th January) and Cuttack (27th January).
1948—Broadcasting started at Shillong and Gauhati (1st July).
1948—Broadcasting started at Srinagar (Kashmir) 1st July.
1948—Broadcasting started at Nagpur (16th July).
1948—Broadcasting started at Vijayawada (1st Dec. 1948).
1948—Baroda Station taken over by Government of India (16th Dec. 1948).
1949—Allahabad Station opened on 1st February, 1949.
1949—Jodhpur Station went on the air on 26th Jan. 1949.
1949—Jullundur Station opened on May 16.
1949—Ahmedabad Station opened on April 16.
1950—Calicut Station opened on June 1.
1950—Stations of Mysore, Trivandrum, Hyderabad and Aurangabad incorporated in AIR on 1st April.
1950—Dharwar Station opened on Jan. 8.
1953—Poona Station opened.

INDIA'S COMMERCE

PATTERN OF INDIA'S TRADE—PAST & PRESENT—Throughout the British period, India normally had a favourable balance of trade. The preponderance of manufactured articles in the country's imports and that of agricultural commodities and raw materials in its exports were a feature of India's foreign trade. A quarter of India's import trade consisted of cotton and cotton goods, others were cotton textiles, mineral oils, machinery, art silk, chemicals, wood and timber, provisions, drugs and medicines, hardware, liquors, spices, etc. On the other hand, jute manufactures accounted for nearly a quarter of India's total export trade. Wool and wool manufactures, raw jute and cotton, tea, lac, seeds, grains, pulses and flour, leather, hides and skins, tobacco and fruits and vegetables were among the commodities exported from this country. On the whole, India had a favourable balance of trade, the value of her total exports exceeding that of her total imports. With the outbreak of World War II, the position became more favourable, and a radical change took place in the structure of India's foreign trade. As the war advanced, the demand for raw materials went up by leaps and bounds. Manufactured articles were also exported in large quantities than ever before. The result was that the volume of exports rose to unprecedented heights and India was able not only to repatriate all her foreign debts but also to accumulate large sterling balances.

With the cessation of hostilities, however, there took place a gradual reversal of this trend. A decline in the exports became visible everywhere, because commodities which India was able to supply now became available from other sources and also they were comparatively cheaper than India. At the same time, the relative cheapness of foreign manufactures brought about a great inflow of imports which was far in excess of the country's real needs. India was thus faced with an excess of imports over exports. And their deterioration in the balance of trade grew more worse with the partition of the country. Before partition, India exported many raw materials such as raw jute, raw cotton, raw wool, and hides and skins which now had to be imported. Commodities such as cotton, wool and hides which previously figured among her exports now prominently became imported commodities. The partition of India reduced India's capacity to export raw materials and at the same time, made her a substantial importer of raw materials. Partition had also an adverse effect on the imports of food grains, as the country became more than ever dependent on imported food grains. The other causes of decline of exports were—increased cost of production which induced Indian manufacturers to charge high prices which acted as a check to exports. The lack of adequate, facilities for transport was another factor which adversely affected India's foreign trade. The cumulative effect of all these was a heavy adverse balance of trade.

REMEDIAL MEASURES FOR INDIA'S FOREIGN TRADE—With this critical situation regarding India's foreign trade, the Government of India began to devise various measures to meet the situation to increase India's foreign trade.

The remedy primarily lay in reducing the import of certain commodities and simultaneously in increasing the export of others. The measures taken by the Government are as follows:

(1) Progressive liberalization of export control for export promotion.
(2) Trade agreements and arrangements with foreign countries.
(3) Consolidation of commercial services abroad.
(4) Participation in international fairs and exhibitions.
(5) Opening of show rooms in important centres of world trade.

(6) Standardization of Indian goods and commercial servicing and publicity through the various units of the Ministry.

Export promotion—Towards export promotion, the Government have followed a policy of progressive decontrol. Until the end of 1950, about 250 articles were decontrolled altogether. During 1951 about 60 other articles were placed on the Open General Licence. Further, steps were taken to increase production of essential raw materials for domestic consumption without which large scale expansion of exports was not possible. Also, with a view to maintaining the reputation of Indian products in the foreign markets, the proper standards, were fixed for important export commodities. Tax relief was granted to certain commodities. Steps were taken to ensure that Sales Taxes levied by State Governments did not apply to exports. Import duty on raw materials used by industries producing for export was reduced. Export goods were given high priority in the matter of transport and export licensing was centralized.

Trade agreements—Bilateral trade agreements were concluded with countries like Switzerland, Hungary, Poland, Finland, Egypt, Iraq, Afghanistan, Australia, Burma, Czechoslovakia, Western Germany, Austria, Indonesia and Japan. The object of the agreements was to establish direct trade contacts with these countries, secure essential and scarce goods not otherwise obtainable, and to promote the export of Indian goods. These trade agreements were of two types, namely, trade agreements with quantitative commitments for export and import of goods and general trade arrangements through exchange of letters of commercial goodwill.

Commercial Services—India has Indian commercial representation at twenty-two centres as against only ten before August 1947. In the countries where trade representatives have not so far been appointed Indian trade interests are being looked after by the Indian Ambassadors, Consuls-Generals, etc. Besides sending monthly and annual reports regarding export promotion in foreign countries, India's trade representatives answered trade enquiries, actively encouraged the establishment of trade relations between genuine firms on either side, publicised India products by various methods.

Fairs and Exhibitions—With a view to popularising her products abroad, India participates in a number of international fairs and exhibitions. Exhibitions of Indian goods are also organised by Government through their trade representatives in different cities of the world.

Show-rooms—The Government pays special attention to organising show-rooms at Indian Missions abroad. These have been opened in London, New York and Bangkok and there are window displays of goods at Alexandria, Djakarta, Prague, Stockholm, Tokyo, Mauritius, Trinidad and Kabul.

TRADE CONTROL—EXPORT AND IMPORT—For the proper economic and industrial development of the country, the raw materials which are in short supply or difficult to procure, have to be produced, regulated and controlled. The object is (1) to conserve available stocks (2) to enable the industries to obtain an equitable share of these stocks at fair prices and (3) to satisfy consumers' needs by effecting equitable distribution of products, such as cotton cloth, jute manufactures and cement among direct consumers or cotton, yarn, pig iron and steel among consuming industries. This is the main underlying idea of trade control in operation at present. Furthermore, there is a price control over a number of essential commodities—mainly imported since they are in short supply in many countries owing to American stock-piling and European rearmament programme.

Export Control of commodities was introduced in India during World War II with a view largely by preventing essential commodities reaching the enemy, to ensuring supplies for successful prosecution of war and also for conserving essential supplies for civilian consumption in the country. Unfortunately with the cessation of war, conditions have not yet made it possible for export control to be withdrawn. But export control is being gradually liberalised at various stages and various items, previously controlled have been released from control from time to time. Export control has been retained only for scarce commodities. But the degree of restrictions which export control has to exercise on different commodities depends on a number of important factors, such as, the conditions of internal supply, changes in international demand which has been subject to sharp fluctuations. For insistance, the volume of exports of agricultural products to be allowed in any one year can be determined when the crop position is known.

The main objectives of export control are as follows—(1) to encourage exports, consistant with internal requirements, in such a manner as to further the economic development of the country, (2) to canalise exports to yield sufficient dollar and other hard currencies, (3) to encourage exports of processed goods, (4) to conserve supplies for internal consumption of these commodities which are in serious shortage, (5) to control the rate of exploitation of India's mineral resources.

The main object of *import control* was to regulate imports within the limits of India's foreign exchange resources and thus to arrest the growing adverse balance of trade. To this end, O.G.Ls are being continually widened and cancelled or are being issued with greater restrictions and with narrower scope as situation demanded. In this way, the main object, that of reversing the adverse trend in the country's balance of trade is being achieved.

The basic objectives of Indian import control policy are as follows:—

(a) to limit the aggregate imports on Government or commercial account, to the available foreign exchange earnings from different sources, (b) to distribute the available foreign exchange resources in the most equitable manner among the commodities required for (i) the planned development of agriculture and industry and (ii) the essential requirements of consumers, (iii) consistantly with the above, to moderate the fluctuations in the prices of particular commodities, where they may have abruptly risen much above the parity of the general level of prices on account of shortages resulting from differences in supply or other causes.

PROCEDURE OF EXPORT AND IMPORT—*Export Procedure* —The power to control export trade is derived from the *Import and Export* (*Control*) *Act of 1947*. Notifications are issued from time time under this Act to bring any particular items or class of items under control, such notifications prohibit export except against a licence. Goods which are not covered by the Export Trade Control Notifications and are not subject to any form of restriction may be shipped without export licence. Open General Licences are also issued in respect of certain items and/or certain destinations.

As is the case with import licensing, the Ministry of Commerce and Industry is responsible for the execution of policy and works through the office of the Chief Controller of Exports.

Import Procedure—Legal sanction for import licensing machinery and procedure is provided by the Imports and Exports (Control) Act, 1947. The importation of goods in contravention of this Act renders the importer liable to penalty and the goods to confiscation under the provision of the Sea Customs Act, 1876. This Act with its rules etc., subjects to import licensing all articles except gold, bullion and coins which fall within the jurisdiction of Reserve Bank of India. It should be noted carefully that import licences can only be obtained by importers established in India and enjoying (except in certain cases) a past record of imports of the same commodity. The execution of import licensing policy is the responsibility of the Ministry of Commerce and Industry, working through the Chief Controller of Imports whose office is attached to that Ministry.

TARIFF COMMISSION—The origin of the Tariff Commission is to be found in the recommendations of the Fiscal Committee established by the Govt. of India by a resolution on 20th April, 1949. The Fiscal Commission came to the conclusion that India needs a permanent authority to examine claims for protection to supersede the old temporarily appointed Tariff Boards and that the terms of reference of the new body and its powers should be wider than those of the old Tariff Boards. The Fiscal Commission laid down as its first principle for the application of protection that it should be related to an overall planning of development.

Its **Constitution**—The membership of the Tariff Commission comprises not less than three and not more than five members, one of whom is to act as Chairman. Not more than two additional members may be appointed for special purposes. Assessors with special knowledge may also be appointed by the Central Government to assist the Commission in specific enquiries. Sittings of the Commission are to be open to the public unless the Commission decides otherwise in any particular case.

The Commission is a quasi-judicial body and can, as such summon and enforce attendance, examine on oath and compel the production of documents.

The functions of the Commission—The Commission may-

(a) consider claims of protection from industries which have not yet started production;

(b) consider the question of protection for agricultural as well as other industries;

(c) consider requests for protection by means other than an increase in tariff rates, *e.g.*, by concessional duties in respect of raw materials and by subsidies;

(d) enquire and report generally on the effects of protection on prices and cost of living and on anomalies arising from the operation of protective or revenue duties;

(e) act in respect of certain classes of enquiries, *suo motu*;

(f) decide on the duration of protection;

(g) enquire price of particular commodities whether protected or not;

(h) investigate into and report on the following matters—increase or decrease in customs or other duties for protective purposes, dumping, undue advantage being taken of tariff protection by protected industries;

(i) consider the effect of protection on the general price level, the cost of living or the country's economy generally;

(j) consider anomalies resulting from the working of protective duties;

(k) enquire, at prescribed intervals the effects of protection on a given industry with reference to cost of production, scale of output, quality, prospects of future expansion and the competitive position of the industry.

Principles guiding the Enquiries—When investigating a case for protection, the Commission is required to have due regard to the following points—

(a) Comparative costs of production in India and competing countries;
(b) Cost of import of competing commodities;
(c) Representative fair selling price;
(d) Level of demand, local production, and imports;
(e) Effect of protection (if granted) on other industries including cottage and small scale industries.

IMPORTS OF FOREIGN MERCHANDISE BY SEA & AIR

(*In Thousands of Rupees*)

(Monthly averages or Calendar month)

		Food, drink & Tobacco	*Raw materials & unmanufactured Articles*	*Articles wholly or mainly manufactured*
1948	..	8,88,22	9,43,70	22,74,63
1949	..	10,94,80	13,21,78	27,89,67
1950	..	7,96,75	14,85,74	19,27,92
1951	..	18,17,32	18,72,71	27,12,80
1952	..	19,42,69	18,66,06	24,82,70

EXPORTS OF FOREIGN MERCHANDISE BY SEA & AIR

(*In Thousands of Rupees*)

(Monthly averages or Calendar months)

		Food, drink & Tobacco	*Raw materials & unmanufactured Articles*	*Articles wholly or mainly manufactured*
1848	..	6,59,13	8,21,77	19,88,86
1949	..	6,53,20	7,89,15	17,97,72
1950	..	10,25,38	8,88,04	24,38,49
1951	..	13,42,94	13,33,91	34,73,49
1952	..	12,17,14	11,83,85	24,50,96

(*Monthly Abstract of Statistics July* 1953)

INDIA'S BALANCE OF TRADE IN MERCHANDISE

(Private and Government—Sea, Air and Land)

In lakhs of Rupees

1951-52		1952-53	
Imports	942,49	Imports	657,92
Exports	732,86	Exports	574,92
Balance	—209,63	Balance	—6,32

(*Report on Currency & Finance* 1952-53)

INDO-PAKISTAN TRADE

(In Lakhs of Rupees)

Exports		Imports	
1948-49	75,01	1948-49	109,29
1949-50	41,43	1949-50	44,04
1950-51	30,43	1950-51	43,87
1951-52	45,26	1951-52	87,50
1952-53	31,10	1952-53*	21,88

(*Report on Currency & Finance* 1952-53)

* Provisional.

VALUE OF TRADE

(In Crores of Rupees)

	1951-52	1950-51	1949-50
Net Imports	965·25	608·84	639·75
Total exports (including re-exports)	732·63	601·38	506·02
Balance of Trade	—232·62	—7·46	—133·73

INDIAN INDUSTRY

TREND OF INDIAN INDUSTRIES—India is one of the eight industrial nations of the world. In steel, cotton textiles, sugar, cement, jute, the country occupies a very supreme position in world market. During World War II India emerged as an important supplier of materials to the Middle and Far East. But in 1946 industries throughout the world, specially in India, had entered into a critical period. This critical condition developed for the following causes (1) urgent need of repairs and replacements of industrial equipment due to a severe strain during war, (2) restiveness of labour, (3) Shyness of capital due to post-war slumps, (4) partition of the country which destroyed the economic unity of the country with the consequent loss of textile and jute industries.

The attitude of Government towards industry so long was one *laissez faire*, viz., the industrial progress was best achieved by unregulated private enterprise. This doctrine of *laissez faire* underwent some modification after the World War I. State had to play active role in the industrial development of the country and the industrial policy, so long followed, would not suit the changed economic condition of the country.

The situation called for a prompt action and the Government after a conference in 1947 with leaders of industry and labour, analysed that this fall of production was due to (1) shortage of raw materials and transport, (2) want of replacement and (3) labour untest. To remedy all these defects, the Government called a tripartite conference of employers, labour, and Government where a three years' truce was agreed upon in national interests; Short term plans for 32 industries were drawn up. To deal with the other problems, the Ministry of Industry and Labour drew up plans so that, difficulties could be removed within a period of eighteen months. This envisaged the provision of essential capital goods and raw materials of industry.

MINISTRY OF COMMERCE AND INDUSTRY—The entire field of foreign trade including control over imports and exports, the negotiation of trade agreements and commercial treaties, the determination of tariffs, commercial representation in overseas countries, participation in international conferences and exhibitions and trade publicity overseas comes within its sphere. In the internal trade of the country too, the Ministry is responsible for control over interstate trade and commerce, trade marks and patents, forward markets and price controls. Practically the entire field of privately owned industry, including cottage industries and plantation industries like tea, coffee and rubber is in its charge. In the interest of the consumer, the Ministry exercises control over production, distribution and prices of essential commodities like cotton textiles iron and steel, cement, imported copra and coconut oil, while it is equally responsible for helping the producer in increasing his output and for accelarating the industrial development of the country.

ADMINISTRATIVE SET-UP—For the implimentation in day to day administration of the Ministry, there are number of organisations attached to it which work under its control and supervision and in close collaboration with it. They include—

(1) *Office of the Chief Controller of Imports and Exports*, New Delhi with branches in Calcutta, Bombay, Madras, Cochin, Amritsar, Shillong and Rajkot. The office is responsible for exercising control over the foreign trade of the country.

(2) *Textile Commissioner* who apart from control over cotton piecegoods, has now been made responsible for all the textile industries other than jute industry.

(3) *Development Wing* consisting of two Industrial Advisers, one dealing with engineering items and the other with chemicals and other non-engineering items. Recently the Development Wing has been made responsible for small scale industries.

(4) *Iron and Steel Controller* who exercises control over the production, distribution and prices of iron and steel.

(5) *Economic Adviser's office* which is responsible for the study of price levels and undertakes economic research on matters engaging the attention of the Ministry.

(6) *Tariff Commission* which enquires into claims for protec-

tion and other allied matters which may be referred to it by the Ministry from time to time.

(7) *Director-General of Commercial Intelligence and Statistics* who is responsible for the compilation and publication of commercial statistics and other measures intended to help the trade and commerce of the country.

(8) *Director of Industrial Statistics* who is concerned with the statistics relating to the manufacture of different items.

(9) *Controllers of Patents and Designs and Registrar of Trade Marks* who are respectively responsible for the administration of Patents and Design Act and of the Trade Marks Act.

(10) *Four Statutory Boards, namely, Central Silk Board, Central Tea Board, Indian Coffee Board* and *Indian Rubber Board* which deal with problems of these particular industries.

INDUSTRIAL POLICY OF THE GOVERNMENT—is based on the Industrial Policy Resolution promulgated on 6th April, 1948. The following is the summary of the Resolution:—The immediate objective is to provide educational facilities, health services and a rise in standard of living by exploiting the country's resources, increasing production and offering opportunities to all for employment. To this end the Government propose to establish a National Planning Commission to formulate programmes and to secure their execution. In the present state of country's economy, emphasis should be placed upon expansion of production: in particular on production of capital equipment, of goods satisfying the people's basic needs and of commodities for export.

The State is to play a progressively active role in the development of industries. For sometime to come the State can contribute more quickly to the increase of national wealth by expanding its present activities. Wherever it is already operating and by concentrating on new units of production in other fields rather than acquiring and running existing units: *The exclusive monopolies of Government are to be*—

(*a*) manufacture of arms and ammunition;

(*b*) production and control of atomic energy;

(*c*) ownership and management of railway transport; and

(*d*) in any emergency, any industry vital for national defence.

In respect of the following industries, the State will be exclusively responsible for the establishment of new undertakings, except where in the national interest it is necessary to secure co-operation of private enterprise—

(1) Coal, (2) Iron and Steel, (3) Aircraft manufacture, (4) Shipbuilding, (5) Manufacture of telephone, telegraph and wireless apparatus, excluding radio receiving sets, and (6) Mineral oils.

Existing undertakings in the industries specified above are to be allowed to develop in ten years, at the end of which period the matter will be reviewed. Rights of compensation are guaranteed.

With the exception of the generation and distribution of electric power (for which there is a separate regulating measure), the rest of the industrial field will normally be open to private enterprise. A certain number of "basic industries of importance" will be planned and regulated by the Central Government on the grounds that they require considerable investment or a high degree of technical skill or central control of location. These industries are as follows—

Salt.
Automobiles & tractors.
Pime movers.
Electric Engineering
Other heavy machinery.
Machine tools.
Heavy chemicals, fertilisers and pharmaceuticals and drugs.
Electro-chemical industries.
Non-ferrous metals.
Rubber manufactures.
Power and industrial alcohol.
Cotton and woollen textiles.
Cement.
Sugar.
Paper & Newsprint.
Air and Sea transport.
Minerals.
Industries related to defence.

The Government reserves to itself the execution of multi-purpose projects and has in view other enterprises such as manufacture of essential drugs and of synthetic oil.

Cottage and small scale industries are to be developed on lines complementary to large-scale industrial production. A Cottage Industries Board is to be set-up.

The Tariff policy of the Government of India will be designed to prevent unfair foreign competition and to permit the utilisation of India's resources without imposing unjustifiable burdens on the consumer.

DEVELOPMENT AND CONTROL—The industrial policy of the Government in 1948 envisaged state regulation and control of industries in the private sector. These powers of the Government had to be acquired by legislation. The first step in this direction was passing of *Industries (Development and Regulation) Act of 1951*. This Act brings under Government supervision all the more important industries of the country except the plantation industries and provides for the setting up of Development Councils to promote efficiency in production and co-operation amongst all those interested in the industries covered. The Act is the keystone of Government policy towards private industry and gives wide powers of direction and control to the Government. This Act includes industries, such as aircraft, arms and ammunition, electric lamps, electric motors, paper, and non-ferrous metals, petroleum products, ships, etc., altogether 37 scheduled products. This Act provides for the licensing of new industrial undertakings and a substantial expansion of the existing units. It authorises the Central Government to frame rules for the (1) regulation of the existing undertakings, (2) regulation of production and development in these industries, (3) consultation with State Governments on these matters.

The Act also envisages the constitution of a *Central Advisory Council* and *Development Councils* for selected industries or groups of industries. The Central Advisory Council consisting of the representatives of industry, labour, consumers and primary producers has already been constituted. The Development Council comprises the representatives of labour, technicians, and consumers. They will draw up plans for development, determine targets of production and forms of efficiency and formulate measures which would lead to the fullest utilization of existing industrial capacity.

The Act empowers the Central Government to take over direct control of industrial undertakings in an emergency. If the production is appreciably falling or if the quality of production is deteriorating in an industrial unit, the Government may conduct an enquiry into its affairs and suggest suitable remedies. This Act will apply to all factories which employ 50 or more workers and are run by power. It is also applicable to a factory which does not use power but employs 100 workers or more.

THE GOVERNMENT ORGANISATIONS—The Government have set up the following main organisations for the development of industries in India—

Cottage Industries Board—Cottage Industries Board which was set up in accordance with the recommendation of the Industries Conference of December, 1947, was reconstituted in 1950. The Board has the following functions:—

(1) To advise and assist Government on the organisation and development of cottage and small-scale industries and function as an executive body exercising executive functions through the Executive Committee;

(2) To examine and advise how cottage and small-scale industries can be co-ordinated with large-scale industries;

(3) To examine the schemes of the State Governments for the promotion of cottage and small-scale industries and to assist in coordinating them;

(4) To advise the Government on the marketing of the products of cottage and small-scale industries in India and abroad.

A Central Cottage Industries Emporium was opened at Delhi in April, 1949.

Council of Scientific and Industrial Research—This Council formed under the Central Government auspices, is the first organised effort in India to popularise and put into effective use the application of science to industry. It has under it 24 expert committees which survey the scientific needs of the various industries from time to time and suggest the means of developing them. It has established the 11 national research organisations. A committee, known as the Industrial Liason Committee, functioning under its auspices is required to keep in constant touch with the industries on matters, relating to the utilisation of the results of researches carried under its auspices.

Directorate of Industrial Statistics brings out a bulletin which gives monthly statistics of production covering 92 select industries divided into 19 groups.

Patents Advisory Committee grants patents to inventors in various technical and research establishments and for commercial exploitation.

Government have also established *Handloom Development Board* in 1950 with a grant of 1,000,000 for distribution in different States.

Silk Board was constituted in May, 1949 for the development of sericulture in India. The Government is encouraging the industry by means of grants to States, establishment and development of cocoon markets, importation of silk from Japan, cultivation and production of mulberry.

Industrial Finance Corporation—This Corporation established by the Industrial Finance Corporation Act of 1948 in order to make medium and long-term credits available to the industrial concerns in India. Its authorised share capital is Rs. 10 crores of which Rs. 5 crores have so far been issued, approximately Rs. one crore each to the Central Government, the Reserve Bank and Scheduled Banks, Insurance Companies, Investment Trusts, Co-operative Banks and similar institutions. The capital is guaranteed by the Government of India as to the repayment of the principal and of a minimum dividend at the rate of 2¼ per cent per annum.

RESEARCH—A chain of *National Laboratories* has been set up under the Council of Scientific and Industrial Research to death with the technical problems of industries.

Indian Standard Institution—Enrolled as a member of the International Standard Institution, Geneva, this semi-official body has been set up by the Government of India under its control with the object of improving the standards of Indian products to bring them up to quality levels competitive with foreign products and to standardise the quality of Indian goods for consumption at home and abroad. With its textiles, engineering and chemical wings among its five sections, such an institution has of late been keenly required owing to the fall in the marketability of Indian products in the absence of standard specifications and quality control.

GOVERNMENT INDUSTRIAL UNDERTAKINGS—In fulfilment of the Government's industrial policy as also due to lack of sufficient private enterprise in many fields, the Government of India have taken in hand some big and small industries and are contemplating some more. A new Ministry, the Ministry of Production has been created to be in charge of production in all Government industrial undertakings which are not already within the sphere of other ministries.

Government of India Projects

Projects	*Estimated cost (crores of Rs.)*	*Capital structure*
1. Hindustan Shipyard Ltd.	10	2/3rds. owned by Government of India & 1/3rd. by Scindia S. N. Co.
2. Sindri Fertilisers and Chemicals Ltd.	23	Authorised capital 30 crores wholly owned by the Govt. of India.
3. Machine Tools Factory Jalahalli, Bangalore.	8·37	Wholly owned by Govt. of India.

4. Dry Core Cables Factory, Rupnarainpur, W. Bengal.	1·1	Wholly owned by the Govt. of India.
5. Penicillin Factory, Poona	1·3	to be wholly owned by Government of India.
6. D. D. T. Factory, Delhi..	·2	to be wholly owned by Government of India.
7. National Instruments Factory, Calcutta.	·8	to be wholly owned by Government of India.
8. Nahan Foundry, Himachal Pradesh.	·44	Wholly owned by the Govt. of India, for production of agricultural implements.
9. Locomotive Bldg. Works, Chittaranjan, W. Bengal.	14·9	Wholly owned by the Govt. of India.
10. Integrated Coach Factory, Perambur, Madras.	3·79	Wholly owned by the Govt. of India.
11. Ind. Telephone Industries, Bangalore.	2·18	96 p.c. shares by Govt. of India and Mysore, remainder by Technical Advisers.
12. Eastern Shipping Corporation.	1·48	74 p.c. of the subscribed capital owned by the Govt. of India.
13. Hindustan Aircraft Ltd. Bangalore.	6	Wholly owned by the Govt. of India and Mysore.
14. Ordnance Factories in different parts of the country.		Wholly owned by the Govt. of India.
15. All Central River Valley Projects.		

State Government Projects

National Newsprint & Paper Mills, M. P.	4·98	M. P. Government has provided most of the finances by way of loan.
Mysore Iron & Steel Ltd., Bhadravati.	4·8	

GOVERNMENT INDUSTRIES

1. **FERTILIZER INDUSTRY**—It has been constructed at Sindri at a cost of Rs. 23 crores and is equipped to produced 350,000

tons of an ammonium sulphate every year. It is a State-owned private limited liability company formed in December 1951. The authorised capital is Rs. 30 crores, and all the shares are head by the President of India except one which is held by the Chairman of the Board. The factory was officially opened on 2nd March, 1952. Its finally estimated cost is 23 crores. Sindri has a production target of 1,000 tons of ammonium sulphate daily or about 350,000 tons a year. In the process of manufacture of 1,000 tons of ammonium sulphate per day, about 900 tons of calcium carbonate sludge will be thrown up as a by-product. Plans are under the consideration of the Government of India for utilising this by-product as a raw material for a cement factory with an installed capacity of 300 tons per day. The storage silo constructed for the storage of the finished product is one of the largest monolithic reinforced concrete buildings in the world.

2. **AIRCRAFT INDUSTRY**—The Hindusthan Aircraft Factory at Bangalore, in which the Government of India owns a two-thirds share, was so long engaged in overhauling, assembling and repair work. After hte war it was reformed into a limited company, with Government of India and Mysore as the only two share-holders. It is now Government's instrument for manufacturing aircraft under the control of the Ministry of Defence. The factory in addition has undertaken to manufacture 3rd class passenger coaches.

3. **CHITTARANJAN LOCOMOTIVE WORKS**—For lessening the dependence of the Indian Railways upon foreign sources for locomotives, the Government have started at a cost of Rs. 15 crores a Locomotive Workshop at Chittaranjan (Mihijam). It is designed to produce 120 locomotives and 50 spare boners per annum. This is in addition to the existing railway workshops and repair establishments, one of which at Tatanagar has been sold to the Tatas for development as a Loco Building Shop. The work was started early in 1948 and first India-made locomotive from assembled parts has been produced in 1950 and named *Deshabandhu.*

4. **NATIONAL INSTRUMENTS FACTORY**—The Mathematical Instruments Office at Calcutta, started in 1930 as a small repair and service depot for the instruments used by the Survey of India has now begun to manufacture all kinds of precision instruments—mechanical, optical, electrical, aircraft etc. The Factory is being recognised for the manufacture of instruments required for health, education, defence and other purposes. The Planning Commission has provided Rs. 182 lakhs for this purpose. Another important new activity will be the manufacture of quartz crystal resonators. The factory will be located near Jadavpur College of Engineering, Calcutta.

5. **MACHINE TOOLS FACTORY**—Machine tools are a "master key" industry on which depends the prosperity and security of a nation.

6. **COACH FACTORY**—The construction of a new coach factory for building coaches was began at Peramour in Madras in June, 1952. The factory which is to cost Rs. 4·7 crores will produce every year 350 light-weight integral type of coaches made entirely of steel. It will further serve to increase the domestic production of passenger coaches to over a thousand a year.

7. **PENICILLIN FACTORY**—is being established with the assistance of WHO and UNICEF. The contribution of the Government will be about Rs. 13 lakhs and of the other two organisations $12 lakhs. UNICEF will provide equipment valued at $850,000 and WHO technical assistance involving an expenditure of about $350,000. The ownership as well as the administration of the project will vest in the Government of India. The factory will be erected at Pimprit, near Poona. It is planned to produce 3,600 billion units of penicillin per year to start with, raising 9,000 billion units per year.

8. **HOUSING FACTORY**—The Hindustan Housing Factory Ltd., was incorporated on January 27, 1953 as a private limited company with the Government of India and Basakha Singh-Wallenborg Ltd., as equal partners. The company was formed specially to provide for the utilization of the existing housing factory for the production of foam concrete roofing pannels, pre-stressed concrete components, wood work for building, etc.

9. **NAHAN FOUNDRY**—Another small unit, the Nahan Foundry came under the ownership and control of the Government of India on federal financial integration. The Foundry manufactures sugarcane crushers, sugar boiling pans and other miscellaneous articles required for *gur* manufacture. A private limited company called the Nahan Foundry Ltd., was incorporated on Oct. 20, 1952 for management of the foundary.

10. **OIL REFINERIES**—The Government of India have accepted the proposals of the Standard Vacuum Oil Company of New York and of the Burmah Shell Group of Companies of London for the establishment of two modern oil refineries at Trombay Island in Bombay. Negotiations for the setting up of a third refinery on the east coast of India with the help of the Caltex Company of New York has also been completed. The total output of the two refineries in Bombay will be about 3·3 million tons of crude oil per annum. This will yield nearly 2·9 million tons of refined petroleum products. With the commissioning of the three refineries, nearly 75 to 80 per cent of India's total requirements of petroleum products will be refined in India.

11. **EASTERN SHIPPING CORPORATION**—This Corporation has been formed for increasing India's overseas shipping. The estimated cost of the enterprise is Rs. 1·48 crores. 74 per cent of the subscribed capital is owned by the Government of India. Corporation has purchased two ships for a total cost of Rs. 44 lakhs. It is now engaged in the Indo-Australian trade.

12. **MACHINE TOOLS FACTORY**—The Government of India entered into an agreement with the Oerlikon Machine Tool Works. Zurich. Switzerland in April, 1949 for the supply of technical experts and also starting a machine tool factory at Jalahali, near Bangalore. The agreement envisages the manufacture of 900 high speed lathes and 460 milling machines and 240 heavy duty drilling machines per year. A gear-cutting shop and a foundry are also to be installed. The estimated cost of the scheme is about Rs. 8·37 crore and the

annual value of the output over Rs. 4 crore. The control and management of the factory were transferred on March 1, 1953 to Hindustan Machine Tools Ltd. Bangalore in which the Government hold 85 p.c. shares and Oerlikons 15 p.c. shares.

13. **TELEPHONE CABLE FACTORY**—India requires dry core paper-insulated telephone cables, the demand for which is at present met entirely for imports. Government have entered into an agreement with a firm in U.K., Standard Telephones and Cables Ltd., on November 30, 1949 for the setting up of a factory at Rupnarainpur in the District of Burdwan, West Bengal at a cost of Rs. 110 lakhs. The factory has been planned to produce about 470 miles length of cables of different specifications a year. The management of the factory has been entrusted to a Government-owned private limited company, the Hindustan Cables Ltd.

14. **HINDUSTAN SHIPYARD**—This is the only one ship-building yard in India and until recently this was owned by Scindia Steamship Navigation Company, Visakhapatnam. The Planning Commission has earmarked a sum of Rs. 14 crores to be spent on ship building during five-year period. A little less than half the amount will be spent on the acquisition and development of the Shipyard at Visakhapatnam. Accordingly, the Hindustan Shipyard Ltd., a private limited the company was registered at Delhi on January 21, 1952. In July 1952, a five-year agreement for technical aid was concluded with a French Naval firm on the reorganisation and development of the Yard. The shipyard has at present two building berths, each of them equipped to build ships which measure 320 to 550 ft. in length and weigh 5,500 tons to about 15,000 tons. A third berth which is to be added to the yard is almost ready. To enable the shipyard to sell ships at the same price as in the U.K., the firm will receive a subsidy from the Central Government to cover the difference in the costs of production that obtain in India and the U.K.

15. **MACHINE TOOLS PROTOTYPE FACTORY**—which has been started at Ambarnath will design special type of tools and machines required for use by ordnance factories. A novel feature of the factory is a training school attached to it which will train 100 skilled artisans every year. This factory will meet to a considerable extent the need for the production of proto-types for the new defence equipment.

16. **TELEPHONE FACTORY**—under the name of Indian Telephone Industries Ltd., a telephone factory has been started at Bangalore by the Government of India in collaboration with the Automatic Telephone and Electric Company Ltd., of England for the manufacture of automatic telephones and carrier equipment. It is being now worked as a private limited company. The major share of the capital of the company amounting to Rs. 25 million is jointly held by the Government of India and Mysore and only 5 per cent owned by the Automatic Telephones & Electric Co. of England.

The import of telephones into India has now been discontinued altogether. The factory manufactures all the telephone parts with the exception of dials and condensers. The factory assembles 25,000 telephones every year.

17. **URANIUM-THORIUM FACTORY**—This factory is being set up by the Atomic Energy Commission of the Government of India and will be located at Mahul village near Trombay Island, Bombay on a hundred-acre land.

18. **D. D. T. FACTORY**—A joint plan to set up a D. D. T. factory was signed on July 19, 1952 by the Government of India, World Health Organisation and U. N. International Children's Emergency Fund. The factory is being set up at Delhi. The Government will contribute Rs. 22·45 lakhs and two organisations 3·5 lakhs. UNICEF will provide equipment and W.H.O. technical assistance. The factory will be managed by the Government through a private limited company. It is expected to go into production at the end of 1953 and will have a capacity of 700 tons D.D.T. per year.

19. **NEW MINT**—A modern mint has been constructed at Alipur, Calcutta at a cost of Rs. 2·3 crores. This mint has started work in 1953 and can turn out about 1·2 million coins daily.

20. **WIRELESS FACTORY**—The construction of a factory for the manufacture of wireless equipment, components and valves will shortly be undertaken with assistance of French firm with whom an agreement has been concluded for that purpose. The factory will have research organisation attached to it so as to enable it ultimately to produce the more advanced categories of electronic equipment. The factory is expected to go production in 1956.

DESCRIPTION OF INDIAN INDUSTRIES

1. **Cotton Textiles**—is by far the largest industry of the country with about Rs. 51 crores worth of fixed capital and more than Rs. 100 crores worth of productive capital employed. It employs about 6 lakhs of workers. There are 484 mills in the Indian Union, many others being in course of erection and planning. This shows the extent of growth of the industry since 1818 when the first cotton mill was established in Calcutta or better since 1854 when the first Indian-owned mill went on production in Bombay. As a cotton producing country India occupies the second place in the world and is still the greatest in the east.

Although Bombay, Ahmedabad, Sholapur, Kanpur, Nagpur, Indore, Madurai and Coimbatore are the main centres of the industry, the Bombay State counts for more than half of it. It is in Bombay therefore that the Indian Central Cotton Committee maintains its Technological Laboratory, complete with an experimental spinning plant and a scientific laboratory together with a testing house for research on cloth fibre. The Department of Chemical Technology of the Bombay University is also carrying useful research. Ahmedabad Mill Owners' Association has also started a Research Institute.

With the growth of the industry in India, not only have imports fallen down but the industry has built an export trade of its own in piecegoods as well as yarn. It may be noted in this connection that a major portion of the yarn surplus is turned over to the handloom weaving industry, which by the way is the most important cottage industry of the country, employing about 20 lakhs of weavers throughout the country.

2. **Iron and Steel**—There are at present three main producers of iron and steel, viz., the *Tata Iron and Steel Co.*, the *Indian Iron and Steel Co.*, and the *Mysore Iron & Steel Works* at Bhadravati. The total capacity for pig iron and finished steel is estimated to be 1,878,000 and 1,050,000 tons per annum respectively. The industry is mainly concentrated at the present time in Bihar and West Bengal. The Indian Iron and Steel Co. Ltd., and the Steel Corporation of Bengal Ltd., were merged into one Company under the name of Indian Iron and Steel Co. Ltd., under Steel Companies Amalgamation Ordnance 1952. The object of the merger was to raise production to 620,000 tons of finished steel and 500,000 tons of pig iron by the end of 1956 at an estimated cost of Rs. 35 crores.

The important raw materials of the industry are iron ore, coking coal, manganese ore, refractories made from magnesite, dolomite, chromite, fireclay etc., and fluxing materials like silica, limestone, fluorspar. In regard to most of these raw materials, India enjoys a favourable position. The deposits of iron ore, which is the principal raw material of the industry are plentiful and of superior quality. The average iron content of the ore is between 60 to 69 p.c. as compared to 40 p.c. in Europe, and 50 p.c. in United States.

An agreement was signed on 15th August, 1953 between Government of India and a German combine of two machine firms, Demag and Krupp in order to build up a new steel plant. The plant which is, to occupy a central place in India's five year plan, will have an initial capacity of half a million tons, later to be expanded to one million. The agreement provides for both financial and technical participation in the plant by the German combine. The estimated capital cost of the new plant is 150 million with a German participation of up to 20 million.

Ancillary Industries—The iron and steel industry in India may be divided broadly into two categories—basic and re-rolling. The main producers who may be placed in the first category is iron ore which makes pig iron out of which they manufacture steel. Alongside these there is a wide range of subsidiaries. There are the rerollers who produce certain sections of steel machines from billets and scraps supplied by the main steel producers. It is estimated that there are about 95 steel re-rolling mills in India. Following are the main ancillary industries—(1) *Tinplate* for the metal box and container produced by the Tinplate Company of India Ltd., (2) production of wide range of light rod, hard bright, galvanized and barbed wire, wire nails, bolts and nuts and rivets by Indian Steel Wire Products Ltd. and others who can manufacture railway permanent way equipment including steel sleepers, points and crossing rails, signal materials, special bolts and nuts, (3) there is a steel processing industry for construction of wagons and other railway rolling stock. The most important among them is the *Indian Standard Wagon Co., Ltd.,* (4) there are companies producing machine tools.

3. **Jute**—This important textile industry has the distinction of accounting for over one-third of the total export trade of the country. The progress of the industry can be gauzed from the fact that India has today become the chief jute manufacturer consuming more than 60% of the raw jute of this sub-continent. The total capital invested in the industry is about Rs. 30 crores and the industry employs more than 3 lakhs of workers on the average.

One peculiar feature of the industry is that since industry is based not a little on the export demand, any slackness in it during a year or a season causes the industry to close a portion of its installed capacity. This bespeaks among other things a complete negligence or lack of enterprise in finding out new uses for the golden fibre. At present the mills concentrate on producing mainly (1) *gunny bags* or cloth used for packing rice, wheat, oil seeds etc.; (2) *hessian cloth* or *bags* used for bailing cotton, wool and other fibres; (3) *coarse carpets* and *rugs* and (4) *cordage.*

With the partition, most of the sub-continent's jute-growing areas fell to Pakistan, while jute-manufacturing industry remained in India. But very considerable advances towards self-sufficiency in raw jute mill in India is being made with considerable success.

All but one or two of India's 112 jute mills, are in West Bengal in and around Calcutta on the Hooghly river. All the mills except nine are members of the Indian Jute Mills Association.

4. **Coal Industry**—The industry is governed by the Colliery Control Order, 1945 and the Mines and Minerals (Regulation and Development) Act, 1948. *A Coal Mines Stowing Board* was created in 1939 under the Coal Mines Safety (Stowing Act), 1939 to administer the fund which is raised by the levy of cess on coal and coke and to spend it on stowing of coal and other operations to prevent fires in mines and to avoid wastage of coal. An *Indian Bureau of Mines* was established in March, 1948. Its functions, among others are inspection of mines with a view to effect general improvement of mining method, conversion of mineral wealth by planned, working, recovery of the largest possible quantity, probing of mineral deposits by the use of modern methods of prospecting, advising governments on questions relating to mineral concessions, royalty, rents, taxation and tariffs, export policies etc., and organising on problem relating to mining. The *Fuel Research Institute* at Dighwadi helps to spread the knowledge of the composition of coal and of factors that influence its behaviour when heated. A Fuel Economy and Combusion Section is being organised by the Institute to advise the consumers of coal on fuel economy, washability of Indian coals and blending of coal for cooking purposes.

There has been proposals for State acquisition of mineral rights as a step towards nationalisation of coal industry. According to the Industrial Policy Resolution of the Government of India, coal is one of those industries for which the State will be exclusively responsible for the establishment of new undertakings except where in the national interest, it is necessary to secure co-operation of private enterprise subject to such control as Central Government may prescribe. Coal mines are largely in the hands of private enterprise. The Government owns only eleven collieries which supply coal primarily to the railways.

5. Sugar—India is the sixth largest producer of sugar in the world and the second or third largest producer of sugarcane. Sugar mills on modern lines were first started in India about the year 1903. Sugar manufacture is now the second largest industry of India. The capital invested in the sugar industry is computated at about Rs. 60 crores. Though the sugar industry was enjoying tariff protection since 1932, it is strange that after 2 years of such help the industry not only refuses to stand on its own leg but has not used its days of prosperity to take to more efficient methods of production or to lower the cost. Yet the industry is now the second in the world, with about 26% of the world's canesugar production, the first one being Cuba.

The industry is concentrated in the two notable sugarcane producing States of Bihar and the U.P. which account normally for about 75% of the total production of the country. The progress of sugar industry may be said to have begun only in 1932 when the Government of India adopted a policy of discriminating protection which virtually closed the door for imports and ushered in an era of expansion. This protection stayed right upto 1950, when on the recommendation of Tariff Board the protection was withdrawn.

As yet only about 25% of the total sugarcane production is used for direct manufacture of sugar, more than 60% being utilised in *gur* (molasses) production which in recent years has varied between 2·3 to 4·3 million tons. In India three different processes of refined sugar manufacture are prevalent; and they are (1) direct from cane in modern vacum pan factories, (2) from cane by indigenous open pan factories, *i.e.*, "Khandsaris" (*i.e.*, through the intermediate process of Rab) and (3) from *gur* refined in modern factories. The Indian Institute of Sugar Technology at Kanpur is carrying on research on the scientific and technological aspect of sugar manufacture since its establishment in 1936 and its fruitful studies are already being adopted, although to a very limited extent by the factories.

The yield of sugarcane per acre has been almost stationary. The average has been between 13 to 14 tons and the yield of sugar per acre about 1·40 tons. Compared with 62 tons in Hawaii and 56 tons in Java, the Indian average of sugarcane per acre must be considered low. Hardly less disheartening is the average of sugar per acre. The figure for Hawaii and Java is 6·4 tons.

The responsibility of guiding sugarcane research rests mainly on the Indian Central Sugarcane Committee which has been financing and guiding all sugarcane work in India. A chain of sugarcane research stations has been established in various states to test the improved varieties under varying soil and elimatic conditions and to conduct research on agronomical problems. The establishment in

1936 of the Indian Institute of Sugar Technology at Kanpur is another great contribution made by the Government of India in the cause of sugar industry. It is now proposed to shift this Institute to Lucknow and to attach an Institute of Sugarcane Research, the foundation stone of which was laid on 1952.

The area under sugar cultivation in India is larger than in any other country in the world. But the average yield per acre is low, though it is improving rapidly with the replacing of low quality canes by those of good quality, mostly supplied by the Indian Sugarcane Breeding Station at Coimbatore. It is interesting to see in this connection that the *per capita* sugar consumption of the country (with *gur*) continues to be as low as 30 lbs. (*gur* accounting for 24 lbs.) compared to 112 lbs. in U.K., 114 lbs. in Australia, 115 lbs. in New Zealand, 128 lbs. in Denmark and 11 lbs. in Java.

The distribution of sugar factories are as follows—

West Bengal	4	Mysore	1
Bihar	30	Madhya Bharat	6
Uttar Pradesh	72	Greater Rajasthan	2
Punjab	1	Hyderabad	8
Orissa	2	Saurashtra	1
Madras	16	Travancore-Cochin	1
Bombay	15	Vindya Pradesh	1
Ajmer & Bhopal	2		
Kashmir	1		160
Pepsu	2		

6. **Paper and Paper Boards**—The first paper-mill was started in India a century ago by Dr. William Carey, the famous missionary. It did not make much headway. In 1867 another mill was started at Bally in Bengal. Later, a few mills were started in Bengal and Bombay. With the help of protective tariffs from 1925 to 1947 industry maintained a steady growth though slow as yet to make the country self-sufficient even in paper and paper-boards, not to speak of newsprint for which we are as yet dependent on imports.

The present installed capacity of the industry is about 1,10,000 tons for all varieties of paper and output is about a lakh of tons. This installed capacity is expected to rise to 164,500 tons due to the expansion of the existing mills. And with imports the average *per capita* consumption comes to about 1·4 lbs. as compared to 150 lbs. in U.K., 175 lbs. in Canada, over 300 lbs. in the U.S.A., 77 lbs. in Germany, 4 lbs. in Egypt and 85 lbs. in Sweden. Though as yet in insufficient quantity, India produces varieties of paper and boards including toilet paper, craft paper, mill boards, corrugated boards, grey boards, duplex and riplex boards etc.

At present are 19 mills in India producing paper, including three which are also engaged in the production of pulp boards. Besides there are seventeen mills manufacturing straw boards. The largest number of units are however situated in Bengal and 50 per cent. of the total production of paper is in this State.

Sabai grass and bamboo are the main raw materials used and are met from local resources. Imported wood pulp is used to a certain extent mainly to make quality papers and its proportion has steadily declined, being hardly about 5 to 10 per cent. as present.

The bulk of the production consists of the more common types of paper, *viz.*, printing and writing papers. Some quantities of wrapping and craft papers and of superior varieties like bond, azure laid, ledger, manifold and poster papers are also made. There is no newsprint made at present. Two mills, the *Nepa Mills* in M. P. and *Sripur Paper Mills* in Hyderabad are expected to produce newsprint in the country but there are great handicaps in the way.

Following are the name of paper mills—Titaghur Paper Mills (West Bengal), Bengal Paper Mills (West Bengal), Indian Paper Pulp Co. (West Bengal), Srigopal Mills, (Punjab), Star Paper Mills (U.P.), Upper India Couper Paper Mills (U.P), Rhotas Industries (Bihar), Deccan Paper Mills (Bombay) Gujarat Paper Mills (Bombay), Pudamjee Paper Mills (Bombay), Orient Paper Mills (Orissa), Andhra Paper Mills (Madras), Sripur Paper Mills (Hyderabad), Mysore Paper Mills (Mysore), Punalur Paper Mills (Travancore-Cochin), Tribeni Tissues (Bengal), Convey Paper Mills, Ballavpur Paper and Strawboard Mills.

7. **Leather Hides and Skins**—Leather industry in India ranks probably fourth in importance as an earner of foreign exchange. The leather goods industry with the exception of one or two units is wholly a small-scale or cottage industry. Indian Union produces on an average about 21 million hides and 41 million skins per annum. In India unlike most other hide-producing countries, the production of slaughtered hides is unimportant. Nearly three-quarters of the total annual output consists of "fallen" hides, *i.e.*, derived from animals that have died a natural death.

West Bengal and Madras are overwhelmingly the largest producers of cattle hides, Madras is the largest producer of buffalo hides and sheep skins, and U. P. the largest producer of goat skins followed by Bengal and Bihar.

By far the largest utilisation of leather is in the production of footwear. Footware produced in this country may briefly be classified into two categories—(1) Western types, (2) Indian types. The footwear producers are classified into three classes—(a) machine made section, (b) small-scale section, (c) cottage industry section. The small-scale section of the industry is mainly located in Agra. Agra also is the main centre for footware on a cottage industry basis, although there is considerable production on this basis in Calcutta and Bombay and on a small scale in most parts of the country.

India exports annually leather valued at over Rs. 25 crores, the most important item being tanned or dressed cow hides which account 35 p.c. of total exports. The exports of leather are now fourth largest foreign exchange earner in India.

8. **Power Alcohol**—Indian sugar industry produces large quantity of molasses for which some use must be found. It has normally been used for the production of spirit. Molasses can be used for the manufacture of power alcohol which can be mixed with petrol

in the ratio of not more than 1 : 4 to produce a fuel suitable for motor vehicles though inferior to petrol. The Indian Parliament has passed in 1948 Power Alcohol Act which conferred on the Centre the power to require alcohol to be mixed with petrol in the proportion of not more than 1 : 3. The Planning Commission has set a production target of about 19 million gallons for 1955-56.

9. **Petroleum Industry**—Indigenous supplies in undivided India came from the oil fields in the Attock (Pakistan) and Digboi (Assam) which produced about 10 p.c. of undivided India's consumption. On partition of the country oil fields in the North Punjab went to Pakistan. The Indian industry in oil is thus at present confined to a relatively small area in Assam. Mineral oil is mainly obtained from Digboi oil fields owned by Assam Oil Company. It is now managed by Burmah Oil Co. It has a refinery at Digboi and a tin factory at Tinsukia.

Almost the whole of petroleum demand in India is made by the import of finished products. The search for new sources of petroleum continues. The Geological Survey of India conducts geological and geographical surveys but most of the actual exploratories are done in Eastern India by Assam Oil Combany. Whether or not more sources of crude oil are found, the country's refinery capacity is to be greatly increased. Government of India has entered into agreements with Standard Vacuum Oil Co. and Cultax Oil Company, and Burma-Shell group of companies for setting up of new oil refineries in India. Except for aviation spirit and lubricants, the new refineries will produce most other refined products in demand in India and will go far towards meeting India's requirements of them.

10. **Silk Industry**—The silk industry in India which dates from ancient times, was at one time of very great importance. It reached its peak in about 1870 but decayed after 1900, until in 1939-40 exports totalled only Rs. 22·8 lakhs. The Second World War proved grant incentive to revival, for imports were restricted and silk was required for the defence services. Sericulture industry occupies an important place in the economy of the States of Madras, Mysore, West Bengal, Assam and Kashmir and Jammu. The other States which produce mulberry raw silk are East Punjab, Himachal Pradesh, Bombay, Uttar Pradesh Madhya Bharat and Bihar.

Regarding raw silk production, India produces approximately 21 million lbs. of mulberry raw silk valued between Rs. 65 to about Rs. 80 million a year and about one million lbs. of non-mulberry silk *i.e.*, Tassar, Eri and Muga valued at Rs. 20 million. The States which produce fairly large quantities of non-mulberry silk are Assam, Bihar, Madhya Pradesh, Orissa and to some extent West Bengal.

Raw silk whether mulberry or non-mulberry is in itself a raw material. This raw material has to be thrown and twisted and silk yarn thus produced from raw silk is used for weaving silk textiles and other silk goods. Non-mulberry raw silk is used almost wholly for civilian fabrication purposes, whereas mulberry raw silk has vital importance for Defence services of the country. Dropping silk parachutes were made during World War II which absorbed all the silk manufacture of India at that time.

The Government of India has been giving tariff production to sericulture industry since 1930. For the improvement of silk industry in India under Central control a *Central Silk Board* has been established in 1949 under the Central Silk Board Act LX of 1948. The functions of the Board are—(*a*) undertaking, assisting or encouraging scientific, technological and economic research, (*b*) devising means for improved methods of mulberry cultivation, rearing, developing and distributing healthy silkworm seeds, reeling cocoons, improving the quality and production of raw silk, if necessary, by making it compulsory for all silk to be marketed only after the same has been tested and graded in properly equipped raw silk conditioning houses. The Board is a joint organisation of the Central Government and the State Governments and of the industry itself.

11. **Wool & Woollen Textiles**—Due to the veriations of climate, the production of wool varies in different parts of India. The main areas of wool production are Jodhpur, Bikaner, Uttar Pradesh, Madras, Punjab, Hyderabad, Jaipur and Bihar. The annual production in Indian Union is estimated at 55 million lbs. which can be roughly classified under—(a) *Hill Wools* used in the manufacture of blankets, tweeds, overcoatings and lower quality of woolen shawls, (b) *Plain Wools*, both of coarse-type and fine-type; coarse-type is used for low grade blankets and rugs and fine types for better class blankets, woollen broad cloths, tweeds and good grade carpets.

The main centre of woollen textile industry is in Bombay, after which there are large concentrations at Kanpur, Dhariwal, Amritsar, Jamnagar and Bangalore.

Woollen hand-loom industry is widely established throughout the country. Seventyfive per cent of the industry is concentrated in the colder parts of India, viz., U. P. East Punjab, Rajasthan and Kashmir. The section of this industry produces a wide range of products, namely, blankets, durrecs, carpets, tweeds, shawls, lohis, coatings, pattus, scarfs etc. There is also some production on a lesser scale of knitted goods, *e.g.*, socks, pullovers and jerseys. Certain of the goods manufactured on a cottage industry basis are of special quality and these have a considerable appeal abroad as well as in the home markets. Among these rank Kashmir shawls, carpets and namdas, carpets from Mirzapur and Amritsar and druggets from Mysore and Bellary.

12. **Carpets**—The main centres of production are Amritsar, Agra, Gwalior, and Jaipur for better class of carpets, Kashmir for good class carpets and namdas, Mirzapur and Bhadohi for the cheaper qualities, and Mysore, Bellary, Bangalore and other places in the south for druggets. The industry's raw material requirements are met from local sources of supply. These goods find their outlet predominently in the overseas market.

13. **Cement**—The real growth of the cement industry began in 1944. It is now one of the best managed and well-developed basic industries of India. To-day India has 23 factories with an installed capacity of 3·728 millions tons per annum. Messrs. Associated Cement Companies are the largest producers owning twelve factories with an aggregate capacity of 2·3 million tons or 62 per cent of the installed capacity of the entire industry. Next comes the Dalmias who own four factories with a total capacity of 0·74 million tons. The remaining seven factories produce 0·706 million tons per year. The total investment and total of those employed in the industry are about Rs. 290 million and over 33,000 persons respectively.

The demand for cement in India is probably about four million tons yearly. India is comparatively rich in the raw materials for cement industry.

14. **Pottery**—is said to be the oldest of industries, and is also an ancient art in India. The industry in the modern sense, however, is of comparatively recent origin, although a pottery and stoneware works were established by Burn & Co., at Raniganj in 1860. There are now some 50 ceramic factories in India including those producing insulators, with a total capacity of over 70,000 tons per annum. They are located over a fairly wide area but capacity is mainly centres in Madhya Pradesh, West Bengal, Bombay, Madras and Mysore. Except for ball clay all other raw materials required are to be found in India.

15. **Rubber**—The raw rubber producing industry in South India meets approximately 75 p.c. of the manufacturing demand. Having started with the establishment of a general rubber goods factory at Calcutta in 1920, the rubber manufacturing industry has developed in a remarkable way. But the production per acre of India is very low. It is only 300 lbs. per acre today compared with Malayas' 500 lbs. The tyre industry of India is the principal consumer of raw rubber, consuming almost 80 p.c. of India's production. India's advantage lies in that she has her own rubber plantations concentrated in the south, mainly in Travancore.

Indian Rubber Board has been constituted under the Rubber (Production and Marketing) Act, 1947 for the development of the rubber industry in regard to production and marketing of rubber. It encourages research on rubber, supplies technical advice to rubber growers, improves marketing and collection of statistics and advises government on all matters relating to development of rubber including imports and exports of rubber. The price of rubber produced in the country is fixed statutorily. The Board is financed by a cess levied on all rubbers produced in the country and fees levied for licences issued to dealers and manufacturers.

Rubber articles manufactured in India may be broadly classified under the following categories—(1) tyres and tubes, (2) rubber footwear, (3) rubber-covered cables, (4) proofed fabrics, (5) mechanical rubber goods, (6) medical rubber goods, (7) miscellaneous, such as extrudeal and moulded articles and (8) latex and sponge rubber goods.

16. **Match**—manufacturing hardly existed in this country before World War I although the first factory, and with Indian management, was started at Ahmedabad as early as 1895. A considerable expansion of the industry was however made after the imposition in 1922, of a revenue duty on imports which was converted in 1928 into a protective duty. The effect was conspicuous in that in 1926 a large proportion of the internal requirement of about 18 million gross was produced internally. And the foreign exporters found it so difficult that a big Swedish match combine came to India and established many factories, at Bareilly, Ambernath, Calcutta and Madras, under the name and style of the Western India Match Co., Ltd. Despite a virtual growth of monopoly by the company which supplies about 80 p.c. of the demand now, there has been a considerable growth of indigenous factories. There are at present about 50 match factories in India employing about 16,000 workers and their installed capacity amounts to 80,000 cases. The installed annual capacity of the industry is 800,000 cases of 50 gross of 144 boxes each.

17. **Glass and Glassware**—The Indian glass industry may be divided into two categories—(1) cottage industry making mainly glass bangles in small furnaces from glass blocks produced in factories. The main centre is Firozabad, U. P., (2) Modern factory industry.

With the exception of soda ash, sulphur and certain colouring materials, the raw materials of the industry, *i.e.*, dolomite livestone, and saltpetre are all supplied from indigenous sources. The industry is widely dispersed and there are about 224 factories engaged in the production of glass and glassware. Their distribution territorially is as follows—

U. P.	114	M. P.	6	Punjab	7
West Bengal	34	Bombay	32	States	12
Bihar	8	Madras	7		——
Orissa	1	Delhi	3		224

The manufacture of items like vacuum flasks, machine-made tubing, scientific glassware, glass buttons, machine-made glass ampoules and coloured glasses has became well-established.

The rated capacity for bangle production is some 35,000 tons per annum. It can be said now that India is potentially self-sufficient in glass production.

18. **Plywood Industry**—Noteworthy progress has been made in the Indian plywood industry which consists of 53 plywood factories mainly located in north eastern and southern India, Calcutta, Assam, Malabar, Cochin, Trivandrum and Bangalore. Installed production capacity is rated at 150 million square feet per annum. The biggest demand for plywood comes from the tea industry. The plywood factories in North Bengal and Assam obtain their timber from the Assam forests while those of Calcutta area from Andamans.

19. **Soap**—industry had made remarkable progress even before the war and had built an export trade of its own. India is

largely self-sufficient in raw materials except for caustic soda, soap colours, some perfumes. The consumption of soap in India is estimated at about ¾ lb. per head per annum, about 120,000 tons yearly which compares with 2½ lbs. of Indonesia and nearly 3 lbs. in Ceylon. The demands are met by local production. Imports are now negligible. The industry is divided into an organised section which produces about two-thirds of soap manufactured in India—and a very large number of cottage units producing the remaining one-third, which is mainly cold-process soap.

19. Tea—is a plantation industry of great importance to India as the second biggest export item of the country at present, supplying about 15 p.c. of the total exports in value. The industry part of it lies in cutting, drying and blending of the leaf and in that India specialises unlike China, to whom she is second in the world in production in black tea. It means that unlike the green tea, the black tea is processed in factory through courses of withering, fermentation and drying. It is well-known that the Northern India accounts for about 80 p.c. of the total Indian tea production averaging about 550 million lbs. Assam producing over 70 p.c. of it. The tea plantations in the South India are distributed among four States, Madras, Travancore-Cochin, Mysore and Coorg. More than 75 per cent of the production is exported chiefly to the United Kingdom, United States, Canada, Australia and the middle East countries.

One new fact about the industry has been the setting up of the *Central Tea Board* in 1949, in place of the now defunct Tea Market Expansion Board, with headquarters at Calcutta. The new Board is composed of the representatives of the planters as well as the exporters, the trade, labour, Chambers of Commerce, the Central Governments of the tea-growing areas. Financed by a cess collected on the export of tea, the Board is to arrange for research, collection of statistics, fixing of grade standards, improving the marketing of tea and bulk-buying of tea on behalf of the Government. It carries on propaganda to increase the consumption of tea in the country and elsewhere.

20. Coffee—is one of the major plantation industries of India confined in the South. It provides employment to 1½ lakh people. The industry is confined in the provinces of Mardas, Coorg and the States of Mysore, Travancore and Cochin. It is estimated that at present the expended capital in this industry is over 150 million rupees and the average value of the annual crop over rupees sixty million. The total area under coffee is over 228,586 acres but it is steadily increasing. The main species of coffee that are grown in India are *Coffea Arabica* which is noted for its quality and *Coffea Robusta*. The cultivation of *Liberica* coffee is negligible. The major part of the acreage under coffee, 73 p.c. approximately is claimed by *Arabica* variety. The cultivation of *Robusta* variety is now on the increase.

India produces less than 1 per cent of the world coffee output. Though there is demand for Indian Coffee in overseas markets, internal consumption which has doubled in the last 10 years, has limited the quantities available for export.

Indian Coffee Board is an organisation consisting of representatives of the growers, traders, plantation labour, the various State Governments and the Central Government under Coffee Market Expansion Act IV of 1947. Under the Act, all Coffee States in India are required to register themselves and deliver entire produce of their estates to the common pool controlled by the Board.

21. **Tobacco**—India is the third largest tobacco-producing country in the world. It is third after U.S.A. and China. Madras and Andhra are by far the most important States accounting for nearly 50 p.c. of the area in the country. Madras and Andhra also grows about 95 p.c. of the country's production of Virginia cigarette tobacco. Bombay, U.P. and Behar are next in importance in that order and together claim about 40 per cent of the total acreage in the country.

About Rs. 20 crores are invested in this industry. The industry embraces plantations for the cultivation of leaf and factories for curing, manufacture of cigarettes and smoking tobaccos, paper mills, printing factories and tin box fabricator. The indegenous tobacco industry in India today caters for over 95 p.c. of the trade. The tobacco manufacturing industry in India produces cigarettes, cigars, cheroots, bidis, hookah, chewing and snuff tobacco. While cigarettes are manufactured by mechanical processes, all other products are made by hand in cottage industries.

The two important tobacco species, namely *nicotiana rustica* and *nicotiana tabacum* are cultivated in India. The former is less important commercially, for it is not quite suited for modern tobacco industries of the world. The other species, namely nicotiana tabacum is distributed throughout the country and plays an important role in the international tobacco trade. The important types of this species cultivated in India are cigarette, cigar, chiroot, bidi, chewing, hookah and snuff tobaccos. Under the cigarette type *Virgina tobacco* of varying degree of excellence is produced in the country and is concentrated mainly in Andhra State. Important virginia growing districts are Guntur, Kistna, East and West Godavari. This variety is also cultivated in Bihar, Uttar Pradesh, Mysore, Hyderabad and Baroda States in small quantities. The chief Virginia variety grown in India is Harrison special.

Though on a small extent, *White Barley tobacco* is also cultivated in India in the Guntur district of Andhra. *Natu* tobacco grown in Guntur, East and West Godavari and Vizagapatam districts of Andhra and *Desi* tobacco grown in Bihar State are also used in the manufacture of low grade cigarettes as well as for pipe and shag mixtures.

The bidi tobacco industry is mostly concentrated in Bombay, Madhya Pradesh and Bihar, the chewing tobacco industry in Bombay and U.P. and snuff tobacco industry in Madras.

The total output of Indian tobacco is estimated at 850 million pounds. Although the bulk of the tobacco production in India is consumed within the country, the increasing quantities now exported form a valuable addition to the country's earnings of foreign exchange.

Tobacco has always been a source of nicotine, which is its chief by-product. It is an efficatious insecticide. It is also a source of nicotinic acid.

22. **Automobile Industry**—Local assembly of motor vehicles has developed on a considerable scale since 1948 and in consequence the number of components and accessories made in the country is increasing. There are three principal sections of motor vehicle industry in India—(1) assembly of motor vehicle, (2) producers of components and accessories, (3) builders of bodies of commercial vehicles and utility cars such as station wagons.

The assembly of motor vehicles in India was begun in 1928 by General Motors (India) Ltd., and they and the Ford Motor Company (India) Ltd., had fairly large plants before 1939. The next significant development was the incorporation of Hindustan Motors and Premier Automobiles in Calcutta and Bombay with the avowed intention of progressing from the assembly to the eventual manufacture of motor cars, the first in association with Nuffield organisation and Studebaker Corporation, the second in association with the Chrysler Corporation (U.S.A.) and later the Italion Fiat Organisation.

There were twelve recognised assemblers—six in Bombay and three each in Calcutta and Madras, also another one at Bangalore. All except Bombay produce private cars. The capacity of the reorganised assemblers are officially estimated at 71,700 vehicles annually but this is far in excess of Indian demand. For the private cars all the assemblers import the cars in components and the steel body pressing which are welded locally. All the tyres and tubes are made in the country.

23. **Coir and Coir Products**—India's coir industry is almost entirely confined to the West Coast from Trivandrum in the south to Calicut in the north with concentrations in the coastal districts of Travancore-Cochin. The major portion of coir and coir products and best varieties of coir yarn are produced in Travancore-Cochin. Of the total area of 1,525,759 acres under coconut cultivation in India, Travancore-Cochin shares 651,794 acres or approximately 42 p.c. However so far as coir yarn production is concerned, Travancore-Cochin State produces 85 p.c. of the entire output.

24. **Paint and Varnish Industry**—Indian paint and varnish industry has made notable advance during and after the Second World War, in the range of items produced and also in the quality of its products. The installed production capacity of the industry, which produces paints, varnishes and lacquers, enamel and dry colour pigment as well as stiff paints, distempers, bituminous compositions etc., mainly located at Calcutta and Bombay, is estimated as some 64,800 tons per annum.

25. **Sports Goods**—Sialkot (West Punjab) was the main centre for the manufacture of sports goods in undivided India. With the partition of the country, the industrialists came to India from Sialkot and succeeded in re-establishing manufacturing centres at

Delhi, Meerut, Agra, Jullundur and Batala in the Indian Union. The sports industry is rapidly developing in Jullundur. Government have provided sites for setting up of nearly 151 factories. The ,production of sports in India is of the order of Rs. 10 million. The manufacture of sports goods is essentially a cottage industry. The capital investment required is not large. Following goods are being produced in different centres in India—(*a*) Footballs, volley balls, basket balls, (*b*) Cricket balls and hockey balls, (*c*) Badminton rackets, (*d*) Shuttle-cocks, (*e*) nets, (*f*) gut for badminton and tennis rackets, (*g*) Cricket bats, hockey-sticks, (*h*) Soft leather sports goods, (*i*) Sports and athletic wear, (*j*) other miscellaneous articles, such as billiard cues, fishing rods, etc.

Tennis and badminton rackets are manufactured at Meerut, Jullundur and Batala. *Cricket bats*—Willow is the only timber suitable for a cricket bat of high quality. Substitutes of the cricket bat has been grown in Kashmir; Chinese tallow trees is one of the best substitutes. Indian poplar is used for cheap types of bats. Cricket bats are now manufactured at Jullundur and Meerut. *Hockey Sticks*—Mulberry has proved to be suitable for hockey sticks in India and is considered a standard wood. Hockey sticks are manufactured at Batala, Meerut and Jullundur. *Fishing rods*—For cheap rods bamboos are used.

26. **Fine Chemicals, Drugs and Medicines**—The Indian fine chemical industry is still comparatively small and its further development is hindered by the high cost of intermediates of which there is no local production. Due to the non-development of fine chemicals, the manufacture of drugs and medicines, germicides and similar products is also backward. There is considerable production of tinctures and galenicals, liver extract and shark liver oil which has largely replaced cod liver oil. Strychnine, calcium lactate, bromides and other drugs are produced but in most cases not in quantities sufficient to meet India's requirements. For many years morphine and codeine have been produced in the Government opium factory at Ghazipur and quinine and quinine salts in state-owned plants in Madras and West Bengal from the bark of cinchona trees grown in State and private plantations. Caffeine is produced in Assam from tea waste. In recent years many foreign manufacturers have set up plants in India where proprietary and patent medicines are being produced from imported and local drugs.

Penicillin—plants have been set up in Bombay at Haffkine Institute for bottling imported penicillin. The Indian Government has entered into an agreement with WHO and UNICEF for building of a plant in Bombay State to produce penicillin.

Sulpha Drugs—are being produced from March, 1952 at the factory of Atul Products Ltd. at Bulsar in Bombay State with the assistance of an American and a swiss firm. Sulphathiazole tablets and injectibles are also being produced in a pilot plant at the Haffkine Institute.

At present Indian factories produce large number of patent medicines. The manufacture and sale of drugs are now controlled under the Drugs Act, 1940 which ensures the quality of indigenous drugs.

27. **Vanaspati Industry**—was first introduced into India after World War I by imports from Europe. The first vanaspati factory was established in India in 1930. The Government helped the industry by giving it protection. There are about 50 factories, but not all factories operate continuously. The productive capacity has now increased to 330,000 tons, though it is not fully employed. The vanaspati industry is the second largest food-processing industry, next only to sugar industry. It is the largest of its kind in Asia. It provides direct employment to about 15,000 people and nearly 25 crores of rupees have been invested therein.

28. **Heavy Chemicals**—The impatus given by the war and by the constantly increasing demands of local industry has made India self-sufficient in a variety of chemicals including it is claimed, liquid chlorine, bleaching powder, nitrics, hydrochloric and sulphuric acids, ferrous sulphate, magnesium carbonate heavy, magnesium chloride and magnesium sulphate, while there is an exportable surplus of calcium and magnesium chloride, sodium and potassium bichromates and potassium bromide.

With rapid development of the heavy chemicals and fertiliser industries the demand for *sulphuric acid* is constantly increasing. The number of production unit in 1951, was 49. The industry is widely dispersed in Bombay, West Bengal, U. P. Punjab and Travancore-Cochin.

The estimated annual demand of *caustic soda* is about 63,500 tons. By 1953 demand is expected to reach about 72,000 tons. The installed capacity is more than 25,000 tons annually.

Estimated annual consumption of *soda ash* is about 120,000 tons Installed manufacturing capacity is now about 54,000 tons.

INDUSTRIAL PRODUCTION IN INDIA SINCE 1938

Finished Steel

(000 *tons*)

1938	702	1947	893	1950	1,004
1945	954	1948	857	1951	1,076
1946	890	1949	930	1952	1,103

Cotton Yarn

(*million lbs.*)

1938	1,289	1947	1,296	1950	1,175
1945	1,644	1948	1,447	1951	1,304
1946	1,367	1949	1,360	1952	1,450

Cotton Piece-goods

(*million yds.*)

1938	4,306	1947	3,762	1950	3,665
1945	4,711	1948	4,319	1951	4,076
1946	3,908	1949	3,905	1952	4,598

Jute Manufactures*

(000 *tons*)

1938	1,266	1947	1,051	1950	835
1945	1,086	1948	1,088	1951	875
1946	1,088	1949	946	1952	952

Paper & Paper Boards

(000 *cwts.*)

1938	1,164	1947	1,862	1950	2,178
1945	1,964	1948	1,958	1951	2,638
1946	2,120	1949	2,064	1952	2,750

Sulphuric Acid

(000 *cwts.*)

1938	485	1947	1,200	1950	2,050
1945	734	1948	1,600	1951	2,139
1946	1,200	1949	1,989	1952	1,921

Ammonium Sulphate

(000 *tons*)

1938	14·5	1947	21·3	1950	47·3
1945	22·0	1948	35·2	1951	52·7
1946	22·5	1949	45·9	1952	220·3

Paints

(000 *cwts.*)

1938	572	1947	772	1950	559
1945	1,030	1948	714	1951	670
1946	768	1949	618	1952	643

Matches

(*million gross*)

1938	21·6	1947	23·3	1950	26·2
1945	22·8	1948	26·6	1951	28·9
1946	20·6	1949	26·3	1952	30·4

Sugar

(000 *tons*)

1938	994	1947	901	1950	977
1945	967	1948	1,075	1951	1,115
1946	923	1949	1,001	1952	1,494

Cement

(000 *tons*)

1938	1,404	1947	1,447	1950	2,612
1945	2,209	1948	1,553	1951	3,196
1946	1,542	1949	2,102	1952	3,538

* Figures from August 1949 refer to production of mills in the membership of the Indian Jute Mills Association and also to one non-member mill.

Coal Raisings
(000 *tons*)

1938	28,344	1947	30,000	1950	31,992
1945	28,716	1948	29,820	1951	34,308
1946	28,884	1949	31,452	1952	36,228

Salt
(000 *mds.*)

1938	43,968	1947	51,600	1950	71,316
1945	54,602	1948	63,528	1951	74,376
1946	47,868	1949	55,620	1952	36,228

Electricity generation
(*Million Kwh.*)

1945	4,116	1948	4,575	1951	5,852
1946	4,892	1949	4,909	1952	6,125
1947	4,073	1950	5,088		

Electricity Sold
(*Million Kwh.*)

1945	3,439	1948	3,721	1951	4,762
1946	3,348	1949	3,984	1952	5,033
1947	3,415	1950	4,103		

General Index of Industrial Production
(Base 1946=100)

1946	100	1948	108·4	1950	105·0
1947	97·2	1949	106·1	1951	117·2
				1952	128·9

INDIA'S WATER POWER

Potentiaties of Hydro-electric Power in India—Cheap power is needed for domestic purpose, for the manufacture of fertilisers, for agriculture, and for industry. It is needed further to conserve India's limited source of high grade, particularly metallurgical coal, vast quantities of which at present being used up in generating power for industry, locomotive power for railways and as domestic fuel. Coal as a means of generating power is exhaustible, but water is inexhaustible. Its use for power generation would release coal for use of other purposes of national importance.

A river tamed is a source of power and wealth. It yields electricity to light cities, work factories, and run trains. Its water can be made to irrigate barren fields, prevent floods and ease navigation for inland steamers.

In has been roughly calculated that only about 6 per cent of available water-wealth in our rivers is being utilised and the balance of 90 p.c. is running to waste in the sea and doing incalculable damage to life and property through uncontrolled floods, stagnating pools and malaria mosquitos.

Coal is no doubt the main source of industrial power, but in region far away from the coal fields, the coal costs much and hence hydro-electric power is being rapidly developed in many parts of the country.

India now promises to be one of the leading countries of the world in the development of hydro-electric power and great strides in this direction have already been made. Her potentialities for hydro-electric development is estimated at some 39 million horse-power out of the world total of 300 millions. Only about a half million horse-power has so far been harnessed.

An unwholesome feature of the scanty progress made in India is that most of the existing installations have been planned to satisfy the demands of urban areas. This is best illustrated by the fact that Calcutta and Bombay, with a total population of one per cent of the whole country between them, consume 50% of the total electric energy produced in India, leaving the other 50% for the remaining 99% of the population.

When the hydro-electric projects now under construction or awaiting construction are completed, India's resources of developed water-power will probably rank as the third largest in the world, next only to those of the U.S.A. and Russia.

Methods of Production of Electricity in India—The three chief sources for the generation of electric power are *mineral oil, coal and water*. In recent years, many countries have evinced interest in the harnessing of *wind movements* for the generation of electrical energy. Of these, first is ruled out in India because the country produces only six per cent of her requirements of motor spirit and other fuel oils. India has fairly large reserve of coal. But all the well-known coal deposits are confined to a few localised more or less contiguous areas in Bihar, West Bengal, Orissa, M.P. and Hyderabad. The high cost of transport of coal to such parts as South India and Punjab is a factor which adversely influences the establishment of large thermal power stations in South India or Punjab. So thermal stations should be limited to coal-bearing areas where low grade coals may be utilised for the generation of power. The Indian Coal Fields Committee (1946) stressed the imperative need to restrict the use of high grade coking coal to metallurgical purposes only and suggested non-coking coal which form the bulk of India's reserves should be used in power stations, in industrial undertakings and by locomotives. As for *water power*, it may be said that water is inexhaustible, whereas minerals are wasting assets. At the present moment, the total potential capacity of water power in India is guessed at 25 million kw. which however may well be exceeded after more systematic examination. Roughly speaking, the snow-fed rivers rising in the Himalayas along the length from Kashmir to Assam and the heavy rainfall on Western Ghats are the main sources of hydro power in India.

In addition there are several sites on the rivers flowing in the plains in other parts of the country where high dams could be built and hydro-electric machinery installed. A peculiar feature of most Indian rivers is the seasonal variation of their flow from almost nothing during the dry season to several hundreds of thousands of cusecs during monsoons. This naturally involves the construction of dams to store sufficient water to be utilised during periods of lean flow. In most hydro-electric projects, such ancillary civil works form a substantial part of the capital outlay. Another special feature in regard to Indian hydro-electric schemes is the necessity of co-ordinating power projects with the needs of irrigation. India is essentially an agricultural country and has to depend for irrigation on rivers fed by the monsoon rain. Here is a fundamental clash of interests between the needs of irrigation and electricity. So in many cases, projects have to be undertaken as a joint irrigation-*cum*-electricity measures.

Administration—The Ministry of Irrigation and Power was created in May 1952 by the bifurcation of the Ministry of Natural Resources and Scientific Research. Among other thing, the Ministry is responsible for the development of irrigation and power, central river valley projects, Central Water & Power Commission, Damodar Valley Corporation, co-ordination of power and tele-communication lines, the Central Electricity Acts, etc.

Till recently the generation and distribution of electricity in India was governed by the Indian Electricity Act of 1910. It was merely a restrictive and regulatory measure not designed to promote power development in the country. Government took no basic remedial measures to increase the supply of electricity. Their appalling backwardness was clearly demonstrated during the World War I when only a hydro-electric survey of the country was undertaken by the Government on the recommendation of the Indian Industrial Commission. The need of further power development became apparent during World War II. Accordingly *Electrical Commission* was set up by the Government of India in 1941 to regulate, assist and control the power-generating industry. Later the *Central Technical Power Board* (subsequently merged in the *Electrcial Commission* in 1948) was created in 1945 to assist the State Governments and electricity undertakings in initiating and planning new power schemes. To ensure economy and efficiency in the administration, the Central Electricity Commission and the Central Water Power, Irrigation and Navigation Commission have been amalgamated recently and the new organisation known as the *Central Water and Power Commission* thus came into being. The power wing of this organisation is generally responsible for the co-ordination and promotion of schemes of electric power development. One of its functions retates to planning and designing of power systems.

The Commission's functions range from investigation, surveys, the co-ordination of research, experiments and propaganda to advice and assistance to the Central and State Governments on all important rivers valleys. C.W.P.C. is mainly responsible for initiating, co-ordinating and promoting schemes for the control, conservation and utilization of country's water resources. It also looks after the scheme of thermal power development and transmission and utilisation of electrical energy. To ensure the rapid and orderly generation of electricity, the Electricity (Supply) Act was passed in 1948. It provides for the setting up of a Central Electricity Authority for the entire country as well as regional organisations known as State Electricity Boards. In accordance with the provisions of the Act, the *Central Electricity Authority* was constituted in 1950. It consists of a Chairman, and four members.

The *Cenrtal Electricity Authority* is required to—(i) evolve a sound, adequate and uniform national power policy, co-ordinate the activities of the planning agencies (ii) act as arbitrators in disputes arising between a State Government or a State Electricity Board and the licensees. (iii) carry out investigations and collect and publish data concerning the generation, distribution and consumption of power (iv) make public from time to time information secured under the Act.

State Electricity Boards have been formed in some of the States. The Electricity (Supply) Act of 1948 provides suitable machinery to facilitate the co-ordination of electric power development throughout India.

Pattern of electricity in India—Broadly speaking, most of the electrical developments in India has so far been limited to satisfying the demand of urban areas for power, for industrial purposes, nearly two-thirds of the electricity sold in the country being consumed by industry. Over 60 per cent of the electrical energy produced by public electricity supply undertakings throughout India is absorbed in the cities of Bombay, Calcutta, Madras, Ahmedabad, Kanpur and Delhi which contain less than 3 per cent of the population of the whole country. Out of 560,000 villages with a population of 5,000 and below 2,800 i.e., not more than. 5 per cent had been electrified by the end of 1950—these mostly in South India. The distribution of electrification over towns and villages of different sizes is as follows—

Population range	*P.C. Electrified*
above 50,000 ..	100
20,000—50,000 ..	86·64
10,000—20,000 ..	42·83
5,000—10,000 ..	10·86
below 5,000 ..	0·50

STATE OF POWER DEVELOPMENT IN INDIA

The State of power development in India at the present time is as follows—

(1) South India—*largely hydro-electric.*
(2) Bombay area—*largely hydro-electric but with a limited amount of thermal power.*
(3) Bihar and Bengal coal fields—*mainly thermal power.*
(4) Central India—comprising Hyderabad, Orissa, and Madhya Pradesh—*mainly thermal power.*
(5) Punjab and Uttar Pradesh—*mainly hydro-electric—partly thermal.*

South India—There has been greater development of water power in this region due to long distance from collieries. The first hydro-electric station in this area was built by the Government of Mysore on the Cauvery River at *Sivasamudram* in 1902. Two other power stations, *Shimoga* and *Jog* in Mysore State have been completed. The Jog power scheme is a development of the Sharavati river on the borders of Bombay and Mysore states.

Madras—In the Madras state prior to 1932, the only power station of importance was the steam station in Madras city. The Government of Madras undertook the development of the *Pykara Hydro-Electric Scheme* which was completed in 1932. In 1936 the power station at the foot of the *Mettur Dam* was completed in 1948. In 1941 *Papanasam Hydro-Electric Power* station on Tambraparni river was constructed. In August 1947 the Government of Madras acquired the Madras city Thermal Station and have interconnected with Mettur Hydro Electric Station.

Travancore-Cochin—The most important power development of the Travancore-Cochin State is the *Pallivasal Project* on the Mudivapuzha river in the T-C State. The power net works carry power to all parts of the State.

Bombay Area—In the Bombay State, the only major public utility stations are the Hydro-Electric installations of the *Tata Hydro-Electric Agencies* and the *Thermal Power of the Ahmedabad Electricity Company*. There is only one small power station at the *Bhatghar Dam* which is owned and operated by the State Government. The Government of Bombay have recently established an Electric Grid Department which will undertake schemes for electrification of the entire State. Outside the areas of Bombay and Ahmedabad, there are only two public utility stations in the state—at Sholapur (steam plant) and Surat (Diesel Set).

The three hydro-electric power stations of Tatas—Khopoli, Bhipuri and Bhira are situated on the slopes of the Western Ghats between Poona and Bombay. These Power Stations carry power to urban and industrial areas of Bombay and Poona. Tata power system is also inter-connected with the Steam Power Station of Western Rly. at Kalyan.

Bihar-Bengal Area—With the ample supply of coal, power development of Bihar and Bengal has been based almost exclusively on steam power stations. The largest of the power stations are those belonging to *Calcutta Electric Supply Corporation* with a total installed capacity of 437,290 Kw. This Corporation has four large steam power stations—*Cossipur*, *New Cossipur*, *Southern* and *Mulajore*, all situated on the banks of the river Hooghly. These power stations supply power to Calcutta industrial and residential areas. Other major public utility power stations in the area are Gouripur (53,350 Kw), Sibpur (8,375 Kw), Dishergarh (16,000 Kw), in Bengal and Sijua Jherriah (18,000 Kw), and Patna in Bihar. There are several privately owned power stations belonging to—Tata Iron & Steel Co. Ltd., Jamshedpur, Ind. Iron & Steel Co., Rohtas Industries, Dalmianagar, Aluminium Corporation of India, Asansol.

Central India Area: Hyderabad, Madhya Pradesh and Orissa—There were only two power stations in the whole region—Nagpur with a steam power station and *Cuttack* with a diesel station. Recently however, some new installations have been completed,—at Hyderabad and Cuttack. But the most important addition is the new installation at *Khaperkheda* (near Nagpur) in 1950.

Uttar Pradesh and Punjab—The Ganga Irrigation Canal taking off from the river Ganga at Hardwar has in its long course upto Aligarh 13 falls each averaging about 10 feet. U.P. Government utilised these falls with eight small hydro-electric power stations on the canal with an aggregate capacity of 29,400 Kw. These stations are interconnected with one another and also with two medium sized steam stations—Chandausi and Harduaganj. The combined system supplies power to all the western districts of U.P. The irrigation and agricultural loads consume more than 50 p.c. of the energy generated in Ganga canal power system. At Kanpur, a large steam power station is in operation. Messrs. Martin Burn Ltd. have established steam power stations at Agra, Allahabad, Bareilly, Banaras and Lucknow.

At *Delhi*, electricity is obtained from the Central Generating Station of the Delhi State Electricity Board. The present installed generating capacity is 37,537 Kw.

The old undivided Punjab during 1937-38 developed the hydro-electric site in Mandi state on the Uhl river. The power house is located at Jogindernagar. It so happened that the major portion of the loads connected to Jogindernagar station fell within the limits of Punjab, now forming part of Pakistan. The major load centres coming within the Indian Union connected to Jogindernagar power system are Amritsar, Jullundur, Ludhiana and Ferozepore. A working arrangement has been made between Governments of Punjab (India) and Punjab (Pakistan) for the continuance of the present supply from Jogindarnagar power station to the Punjab (Pakistan) which is expected to be gradually reduced.

POWER PROJECTS UNDER PLANNING AND EXECUTION

Assam—A thermal power station scheme in or around Gauhati which was under consideration has been postponed. Preliminary investigations on a small hydro-electric scheme on the Umtru river near Gauhati are in hand.

West Bengal—(1) *Calcutta Electric Supply Corporation Schemes* at new Cossipur Power stations, at Mulajore station are well in hand, (2) *North Calcutta Electrification Scheme*—power will be purchased in bulk from Calcutta Electric Supply Corporation for rural and semi-rural areas in the north of Calcutta. (3) *Moyurakshi Hydro-Electric Scheme,* (4) *Jaldhaka Hydro-electric Scheme.*

Bihar.—(1) *Sindri Fertilizer Factory Power Station*; the D. V. C. will transmit this power over their transmission lines, (2) Development of the Damodar Valley. The Bokaro thermal station for which the World Bank has granted a considerable loan will be the principal source of power supply to D. V. C. It is located on the bank of Konar river, just below its confluence with Bokaro river. It will use low grade coal pulverised. It has three thermal generators with 50,000 K.w. power, one of them has already been completed and is producing on an average 30,000 K.w. The D. V. C. power transmission will initially consist of 350 miles of main transmission lines capable of saving an area of 25,000 sq. miles, (3) *Patna Electric Supply Company*—additional scheme are being worked out. (4) *Bihar Government Rural Electrification Schemes*, (5) *Kosi River Development*—investigations are being pursued for river project where world's highest dam is expected to be built.

Bombay.—Following are the Bombay Schemes for execution—(a) North Gujarat Electric grid scheme, (b) South Gujarat Electric grid scheme, (c) Jog-Karnatak Electric grid scheme, (d) Extension of the Chola Power station of the Western Railway, (e) Radhanagari Electric works. Following are the schemes for investigation—Koyna Hydro-electric schemes.

Hyderabad.—(1) Nizamasagar Hydro-Electric Scheme, (2) Hyderabad City station extensions, (3) Ramagundam Thermal power station, (4) Tungabhadra Hydro-electric scheme.

Jammu & Kashmir.—Sindh Valley Hydro-Electric scheme.

Madhya Bharat.—Chambal Hydro-Electric Scheme.

Madras.—(1) Machkund Hydro-Electric Scheme—this is the most important scheme under five year plan. (2) Moyar Hydro-Electric Scheme. (3) Nellore Thermal Scheme.

Mysore.—Mahatma Gandhi Hydro-electric Works Extensions (Jog), (2) Lakkavalli Scheme, (3) Mekadatu Scheme.

Orissa.—Mahanadi Project—Hirakud. The Plan comprises the construction of 3 main dams on Mahanadi river—Hirakud, Tekkerpara and Naraj.

Punjab.—Nagal Power Project is under construction. Nagal power scheme is the forerunner of the Bhakra-Nagal irrigation-cum-power project.

Travancore-Cochin.—The following schemes are under execution—(a) Madupatty dam, (b) Pallivasal extensions, (c) Seugulam hydro-electric scheme, (d) Poringalkuthur hydro-scheme.

Uttar Pradesh.—(a) Sarda Hydro-electric scheme—by realignment of Sarda Irrigation canal, it is possible to obtain hydro-electric power at Khatima at the foot of the Himalayas, (b) Pathari-Hydro-electric scheme, (c) Yamuna Hydro-electric scheme, (d) Rihand Power Project.

ELECTRIC ENERGY GENERATED AND SOLD*

(millions of Kilo-watt-hours)

	No. of Concerns	*Generated*	*Sold*
1948-49	469	4,681·1	3,777·7
1951-52	573	5,948·1	4,849·0
1952-53	614	6,301·4	5,134·3

(*Source*; Central Water and Power Commission).

*Excluding Railway, Military and Factory Power Stations.

A COMPARATIVE SURVEY

	Japan	*U.S.A.*	*Canada*	*Sweden*	*U.K.*	*India*
Area (000 sq.m)	142	3,620	3,690	173	94	1,220
Pop. in millions (Aprox.) ..	81	149	13	7	50	362
Installed capacity in mw. ..	10,219†	67,509*	9,950*	2,600‡	15,085*	1,713*
Kwh. generated (in millions)	30,407	329,028	50,795	14,206	55,008	5,106
Installed generating capacity per sq. mile in Kw. ..	72·1	18·6	2·7	15·0	160·3	1·4
Kw. generated per capita ..	376	2,207	3,905	2,029	1,100	14

INDIAN IRREGATION

Usefulness and Greatness of Indian Irrigation—India leads the world in irrigation. More than half of India's water resources are lost through evaporation, transpiration and seepage and only 6 per cent have been harnessed for purposes of irrigation. The two chief characteristics of rainfall in the country are its unequal distribution and uneven precipitation over the year. Variations in distribution being from an average of about 460 inches in one area in Assam to a little over three inches in arid Rajasthan—the average for the whole country being a little over 42 inches.

To-day India has some 50 million acres of irrigated area out of a total cultivated area of 266 million acres, or 19 per cent with irrigation channels extending over 60,000 miles. Of the irrigated area some 50 per cent is from Government works, 23 per cent from wells, and 27 per cent from other sources. The supplies for irrigation are obtained from three sources—

(1) directly from the waters flowing in natural streams;

(2) from the storage of flood waters of these streams or directly from storage of rain water in small tanks; and

(3) from the underground subsoil reservoir.

Of these sources the first is generally the most economic, the easiest to exploit and the more important for the extensive irrigation works of the country which have been constructed mainly during the last hundred years. Large storage works were built only during the last century.

The total cost of all irrigation and power projects included in the first part of the Five Year Plan is estimated at Rs. 734 crores. 110 projects are contained in the first part of the Five Year Plan.

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* 1950 figures; † 1947 figures; ‡ 1946 figures.

Planning Commission and the River Valley Projects—The Planning Commission in its First Five Year Plan has emphasised the importance of river valley projects and has given them high priority. During the period of the Plan 110 projects, major and minor will be completed and a start made on five more new projects. All those under construction, investigation and consideration will require Rs. 2,000 crores and would eventually add about 40 million acres of canal-fed land and generate an additional 7 million kws. of power.

Five new projects Kosi (stage 1), Koyna (stage 1), Krishna (scope not defined), Chambal and Rihand will cost over Rs. 200 crores, of which Rs. 40 crores will be spend during the period of the First Plan.

The 110 projects are mostly being executed by the State Government, but where the limited resources of the State Governments do not permit this, the Centre has undertaken the work. In this category are Hirakud, Kakrapar Weir and canal projects. Among the important projects being executed by the States alone or jointly with or without the Centre's financial or technical help are Bhakra-Nangal (Punjab, Pepsu and Rajasthan), Tungabhadra (Madras and Hyderabad), Machkund (Madras and Orissa), Mayurakshi (West Bengal), Lower Bhavani (Madras), Ghataprabha Left Bank Canal (Bombay) and Gangapur (Bombay). The Damodar Valley Projects are being constructed by an autonomous Corporation.

River Valley Projects—India is well-placed in respect of overall water resources and power potential. It is increasingly being realised that while a project conceived for a single purpose like irrigation or flood control might not be an economic proposition, it might become a financially feasible and productive scheme, if it included other purpose like power generation, navigation etc. So the multipurpose schemes have come in, because of the manifold benefits they yield. Apart from providing irrigation facilities for growing additional food and commercial crops, two other main benefits are the control of floods which cause enormous destruction of crop, property, cattle and humanlife every year and the generation of large blocks of hydro-electric power. Among the other benefits which accrue from the projects are the development of internal navigation which relieves the pressure on the railways, facilitates soil conservation, afforestation, pisciculture and the provision of drinking water. The importance of these projects can be realised from the fact that high priority has been assigned to them by the First Five Year Plan. Nearly a third of the total budget for the plan has been ear-marked for river valley projects.

At present there are 153 projects under execution in different parts of the country of these only six are multipurpose, 104 irrigation and 43 power projects. Twelve of these 153 projects may be termed 'major'. In addition, there are 122 other projects on which preliminary investigations are either in progress or have been completed, but which cannot be undertaken for lack of funds. The cost of these 122 schemes is estimated at Rs. 1,310 crores.

Among the worlds' biggest—Some of these projects are among the biggest in the world. When completed India will have the highest straight gravity dam at Bhakra and the longest multipurpose earth dam at Hirakud (15,784 ft.). The two important earth dams in U.S.—Fort Peck and Garrison though 21,026 feet and 12,000 ft. long and 250 ft. and 210 ft. high respectively, are not multipurpose projects in the same sense as Hirakud. Fort Peck has no irrigation aspect, while Garrison has no power generation plants. Hirakud covers irrigation, flood control, hydro-electric generation and navigation.

Government Departments—The Ministry of Irrigation and Power is responsible for the Irrigation, Hydro-electric and other electric schemes in India. The Indian Union has two central statutory bodies for the work of irrigation—(1) *Central Board of Irrigation and Power* with a Research Committee and a Bureau of Information and (2) *Central Water & Power Commission.* The Central Board of Irrigation and Power coordinates research work in irrigation and hydro-electric matters and establishes contacts with institutions and individuals and disseminates technical information on these subjects, and is also the *liason* body for International Association for Hydraulic Structures Research and runs the Indian National Society for Soil Mechanics and Foundation Engineering. The Central Water and Power Commission is a central fact-finding planning and coordinating organisation to advise Central, . and State Governments in regard to waterways, irrigation and navigation problem throughout the country. The CWPC is mainly responsible for initiating, coordinating and promoting schemes for the control, conservation and utilisation of the country's water resources. It also looks after schemes of thermal power development and of transmission and utilisation of electric energy available in the country.

An important activity of the Commission is the *Research Station* at Khadakvasala near Poona which is endeavouring to determine the best form of structures for the control and development of river in the country.

The *Power Wing* of CWPC is generally responsible for the coordination and promotion of schemes of electric power development. One of its functions relates to planning and designing of power systems.

There is also a Central Standing Committee for coordination of Power and Telecommunication Lines set up in May 1949 which carries out scientific and field studies on the various aspects of coordination problems.

Ministry of Irrigation and Power—The Ministry of Irrigation and Power was created in May 1952 by the bifurcation of the Ministry of Natural Resources and Scientific Research. Among other things, the Ministry is responsible for the development of irrigation and power, central river valley projects, the Central Water and Power Commission, Damodar Valley Corporation, coordination of power and telecommunication lines, the Central Electricity Authority etc. With the adoption of the Five Year Plan, it has also became responsible for watching the progress of irrigation and power projects included in the Plan, for which financial assistance is given by the Centre to the State Governments.

Main Types of Irrigation—(1) *Canal Irrigation*—This is the most important type of irrigation. Canals draw their waters from rivers or from artificial storage. They are mostly seen in Northern India. The river canals are of three classes—*Inundation canals*, *Perennial canals* and *Storage canals*. By inundation canals, water supply is made possible by leading water from rivers and streams. They are formed by making smaller cuts through the river bank, into which the water flows when the level of the river rises during floods. These are generally found in the Indus basin and its tributories. The Perennial canals are built by erecting some form of barrage across a river which flows throughout the year and diverting its water through a canal to the country to be irrigated. These canals are found in Uttar Pradesh and Punjab. Storage canals are built by constructing a dam across a valley to store the rain water during the monsoons. The water so held is later distributed to lands by means of canals drawn from the storage. These works are found in the Deccan, M. P. and Bundelkhand.

(2) The rest of the irrigation is done through tanks, surface percolation wells, tube-wells etc. The term *minor*, applies to this type of irrigation.

(*a*) *Surface Percolation wells* exist all over the country.

(*b*) *Tanks and Reservoirs*. The water collects either in natural depressions, on the beds of streams are dammed up and shallow basins created for storing water.

(*c*) *Flood irrigation and inundation irrigation* are the other sources of minor irrigation in India. The monsoon flood water of rivers diverted to lands which are above the level of the ordinary supply in a river. The flood water soaks the lands and the moisture retained in the soil allows the cultivation of a winter season crop, which otherwise would not be possible.

(*d*) *Tube wells*—This means lifting of water from underground by means of mechanical pumps. This process helps to utilise the sub-soil water resources of the country, particularly in the alluvial plains of the Indo-Gangetic basin.

The irrigation is again divided in three classes by Government—

(1) *Productive*—the capital for the construction and extension of this class is provided out of borrowed money or by appropriation from Famine Insurance grant and which is expected to yield within ten years of their completion sufficient revenue to pay their working expenses as well as the interest on the capital expended on their construction.

(2) *Protective*—These are constructed as protection against famine and the cost of construction is provided out of current revenues or by appropriation from famine insurance grant.

(3) *Minor*—The works are of various kinds and included mostly tanks. They are financed out of current revenues.

CANALS & DAMS OF INDIA

PUNJAB

1. *Western Jamuna Canal* takes its water from the Jumna, near where the river leaves the Himalayas and irrigates the districts of Rohtak and Hissar, States of Patiala and Jhind.

2. *Srihind Canal* takes water from Sutlej River and irrigates Ludhiana, Ferozpur, Hissar and Nabha.

3. *Upper Bari-Doab Canal* takes from Ravi River and irrigates Gurdaspur, Amritsar and Lahore. Its main lines are 324 miles long.

4. *Lower Chenab Canal* is the greatest canal in India and takes water from Chenab and irrigates Lyallpur. It derives its water from that impounded by a great weir across the river Chenab at Khanri.

5. *Lower Jhelum Canal*—takes its water from the Jhelum at Rasul and irrigates lands in the North-west Punjab.

6. *Upper Chenab Canal and Lower Bari-Doab Canal.* It takes its water from the Chenab at Merala at the foot of the Himalayas.

UTTAR PRADESH

1. *Upper and Lower Ganges Canals* irrigate the doab between Ganges and Jamna. The Upper Ganges Canal starts from the head works near Hardwar and crosses the Solanki River by the biggest aquaduct in India near Roorkee. The Lower Ganges Canal takes off at Narora and joins the tail end of the Upper Ganges Canal. The two together irrigate 2½ million acres and contain 7,500 miles of channels, forming the biggest system in India.

2. *Agra Canal* is taken off from Jumna near Delhi and irrigates Mathura and Agra districts.

3. *Sarda Canal* takes off from Sarda river on the borders of Nepal in the north of U. P. and irrigates Rohilkhand and Western parts of Oudh. It commands some 7 million acres in Oudh and Rohilkhand. It has 4,177 miles of main canal distributaries and is the longest canal in the world. In addition some 1,500 miles of drainage channels were constructed to carry off rain-water quickly. Cost of the scheme was £7,500,000.

4. *Eastern Jumna Canal* irrigates north-eastern parts of the province. The canal takes the water from Jumna near Faizabad. Irrigates 400,000 acres.

5. *Trans-Jumna Protective Canals*—were built as protective measures to cope with famines.

MADRAS

Madras—Cauvery-Mattur Project, Godavari Delta System, Kistna Delta System, Cauvery, Delta System, Pennar River Canals System, Periyar System, Chicacole Minor River System, Lower Coleroon Anicut System, Tungavadra Project has been inaugurated in 1945.

WEST BENGAL

West Bengal has two small canals—*Damodar Canal* and *Eden Canal*, which togather irrigate 186,000 acres.

PRINCIPAL RIVER VALLEY PROJECTS

Damodar Valley Project—An autonomous Corporation has been set up to be responsible for implementing the entire project and administering the scheme on completion. The project as a whole envisages the construction of four dams—two each across the Damodar river and its tributary, Barakar river, before they merge into one. There four dams will serve as a reservoir to feed the barrage down the river at Durgapur. Of the four dams, the *Tilaiya Dam* in the upper reaches of Barakar river has already been inaugurated on February 21, 1953, while *Dam on Konnar* river is expected to be finished shortly. The biggest is the *Panchet Hill Dam* which is scheduled by complete in 1955. The work on *Maithon Dam* is in rapid progress.

One of the principal objects of this multipurpose scheme is to tame and discipline the notoriously turbulent river that leaves behind a trail of destruction and misery in almost every monsoon season. The proposed 38 feet high barrage will divert the water of Damodar into a 85 mile navigation *cum* irrigation canal connecting Hooghly on the left side and 121 miles of the main canal. Included in the Barrage project are many miles of drainage channels which are designed to render certain swampy areas in the lower valley arable.

Tungabhadra Project—is a joint enterprise of Madras and Hyderabad States and one of the large multipurpose schemes in South India, was taken up for execution almost immediately after World War II. The main feature of the project is a 160 feet-high dam, nearly 8,000 feet in length (of which 6,000 feet masonry) across the Tungabhadra river. One 225 mile canal taking off from the right bank will irrigate about 250.000 acres in Madras and a 127 mile canal on the left bank about 450,000 acres in Hyderabad. Hydro-electric capacity to the extent of 60,000 Kw. will be installed on the Madras side and from 24,000 to 110,000 Kw. On Hyderabad side at the dam site and at the falls along the canals.

Hirakud Dam Project—is one of the three units envisaged for the development of the Mahanadi Valley. The other two projects will be the *Tikarapara Dam* and the *Naraj Dam* in the middle and lower reaches of the river. The Hirakud project is designed to control floods in the deltaic area of the valley, irrigate 1·9 million acres and generate nearly 200,000 kw. of power. The principal features of the schemes are a main earth dam across the river about eight miles upstream of Sambalpur, a subsidiary dam at the tail end of the power channel and a network of flow and lift irrigation canals. The main dam will be 15,748 feet long with 12·8 miles of low earthen dykes on either side. The maximum height of the dam will 195 feet and the reservoir formed will have a storage capacity of 6·75 million acre feet.

Lower Bhavnani Project—A masonry dam about 1,500 feet long and a little more than 200 ft. high over the deepest foundations is under construction across the Bhavnani, a tributary of the Cauvery. On both flanks of the masonry section, earth dams totalling about

28,000 ft. in length, will be built. A 120-mile canal on the right will irrigate 207,000 acres in the Coimbatore district in Madras State.

Machkund Project—The project is designed to unilise for power generation a gross head of 874 feet of the Machkund river, on the Madras-Orissa border. It comprises the construction of a 134 feet high and 1,300 feet long dam at Jalaput to store 612,000 acre feet of water; an 80 feet high diversion dam across the river 17 miles below; a conduit comprising a 4,000 feet long concrete channel ; a 4,250 feet long free flow tunnel, a small pond and a 3,000 feet long pressure funnel to lead the water to the power house. The construction of the project was begun in 1947.

Bhakra-Nangal Project—This project in the Punjab is the largest multi-purpose project in India and is being executed by the Governments of the Punjab, Rajasthan and Pepsu. The finances required for the project have however, being advanced by the Government of India as interest-bearing loan to State Governments. Its special feature is a gravity dam 680 ft. high across Sutlej about 50 miles above Rupar in the Punjab. The dam will impound the flood waters of the river for purposes of irrigation and the generation of power. The reservoir behind the dam will be 50 miles long and designed to store 5·6 million acre-feet of the river flow. At Nangal, about eight miles down stream, another dam is nearing completion. This dam will serve (1) to regulate the daily variations in the supply of water from Bhakra power plant, (2) to divert the waters of the Sutlej to the Nangal Canal where they will be used for the generation of power, and (3) to feed Bhakra canals. Besides the dam, there will be three power-stations along the Nangal Canal. The grid serving the power stations will comprise about 2,000 miles of transmission lines. According to the present estimates, the total cost of the project will be Rs. 133 crore.

Kakrapara Project—This project on the Tapti river in Bombay State forms part of a more comprehensive project for the development of lower Tapti Valley. It is estimated that a sum of Rs. 12·2 crore will have to be spent at the first stage which will be completed by 1955-56. The project will serve to irrigate 391,000 acres of land during five-year period. When it is completed, however, 652,000 acres of fresh land will come under irrigation.

The Weir will be about 2,175 feet long and 45 feet high above the deepest river. The canals will irrigate 850 miles, intended to irrigate over six lakh miles acres of land in the Surat district of Bombay, are being excavated.

Mayurakshi Reservoir Project—aims at irrigating about six hundred thousand acres in Birbhum area including adjoining areas of the district of Murshidabad and a small area of the district of Burdwan. The project consists of two parts. Part I—the storage dam and reservoir at Messanjore in the Santhal Parganas in Bihar. Part II—barrage and canal system in Birbhum district. The first part provides for the construction across river Mayurakshi at Messanjore a masonry dam of height 136 ft. above the deep foundations. The second part provides for the construction of main barrage across the river Mayurakshi near Suri in the Birbhum district and was completed in 1951.

Kistna Pennar Project—The project aims at harnessing the waters of the great Kistna river draining 80,000 sq. miles to irrigate a little over 4·2 million acres of the first and second crops in the Rayalaseema and in some of the coastal districts of Madras State. It is also proposed to develop power of about 250,000 kw. firm and seasonal.

Rampadasagar Project—consists of (*a*) a dam 428 ft. high across Godavari river, (*b*) two canals taking off an either flank of the dam—one extending upto Visakhapatnam port and the other extending upto Kristna river in the adjacent valley and even beyond into the Guntur district upto the Gundalakama river, (*c*) a hydro-electric generator station at the right flank.

POWER & IRRIGATION PROJECTS IN FIVE YEAR PLAN

	Total Expenditure 1951-56 (lakhs of Rs.)	Irrigation benefits (thousand acres)		Power benefits (thousand Kw.)	
		by 1955-56	on completion	by 1951-56	on completion
Multi-purpose Projects					
Bhakra-Nangal ..	77,50	1,361	3,604	96	144
Harike ..	10,62	—	—	—	—
D. V. C. ..	41,70	595	1,141	194	27
Hirakud ..	44,00	261	1,785	48	123
Addl. fund for above projects ..	50,00	—	—	—	—
New Schemes* ..	40,00	—	—	—	—
Total ..	263,82	2,217	6,530	338	541
Part A States					
Assam ..	2,83	218	218	5	75
Bihar ..	16,82	675	777	11	11
Bombay ..	33,12	474	893	83	84
M. P. ..	9,08	114	184	73	73
Madras ..	84,32	435	608	196	307
Orissa ..	6,91	480	480	18	18
Punjab ..	3,64	666	774	109	—
U. P. ..	33,21	1,361	3,181	109	124
W. Bengal ..	16,13	917	917	4	4
Total ..	206,07	5,340	8,032	489	618
Part B States					
Hyderabad ..	28,00	306	731	53	53
Jammu & Kashmir ..	3,60	76	169	7	7

* The new schemes include Kosi (Stage 1), Koyna (Stage 1), Krishna, Chambal (Stage 1) and Rehand.

Madhya Bharat ..	5,56	83	152	15	18
Mysore ..	19,84	30	250	72	120
Pepsu ..	65	—	129	—	—
Rajasthan ..	5,45	243	523	11	11
Saurashtra ..	6,88	108	120	12	12
Tra-Cochin ..	15,13	17	168	81	81
Total ..	85,10	863	2,242	251	302
Part C States					
Ajmer ..	11	—	—	—	—
Bhopal ..	28	—	—	—	—
Coorg ..	25	—	—	—	—
H. Pradesh ..	93	75	100	1	1
Kutch ..	114	38	38	—	—
Tripura ..	7	—	—	—	—
Manipur ..	12	—	—	—	—
Vindhya Pradesh ..	51	—	—	3	3
Total ..	341	113	138	4	4
Grand total ..	55,841	8,533	16,942	1,082	1,465

THE JUDICIAL SYSTEM OF INDIA

THE SUPREME COURT

At the apex of the Indian Judicature stands the Supreme Court, consisting of the Chief Justice of India and seven other judges. The judges are appointed by the President; but in appointing the Chief Justice, the President must consult such judges of the Supreme Court and the High Courts, as he thinks necessary, and in appointing the puisne judges, he consults the Chief justice of India also.

A judge holds office until he attains the age of sixty-five years. For appointment as a judge of the Supreme Court a person must be a citizen of India and (a) has been for at least five years a judge of a High Court or of two or more such courts in succession; or (b) has been for at least ten years an advocate of a High Court or of two more such courts in succession; or (c) is in the opinion of the President, a distinguished jurist. The Constitution debars a retired judge of the Supreme Court from practising in any court of law or before any authority in India. A judge of the Supreme Court may be removed for misbehaviour or incapacity on an address passed in the same session by both Houses of Parliament with a majority of the total membership of, and a two-thirds majority of those voting in, each House.

The Court normally sits at Delhi. The Supreme Court enjoys both *original* and *appellate jurisdiction.* Its exclusive *original jurisdiction* extends to all disputes between the Union and one or more States or between two or more States *inter se.* The rights of Part B

States created by treaties, agreements and Sanads, executed before and continuing after the Constitution came into force, are preserved, and disputes arising out of such instruments are not within the jurisdiction of the Court.

The *appellate jurisidction* of the Supreme Court extends to all cases from the High Courts involving questions of law regarding the interpretation of the Constitution. This jurisdiction extends to both civil and criminal cases relating to any judgment, decree, or final order of a High Court, either on the certificate of the High Court that a substantial question of interpretation of the Constitution is involved, or, if satisfied that such certificate was wrongly refused.

In ordinary civil cases, an appeal would lie from any judgment, decree, or final order of a High Court, if it certifies the case is fit for appeal. An appeal would also lie if the High Court certifies that the amount of the claim involved is not less than Rs. 20,000.

In criminal cases, the right to appeal to the Supreme Court has been provided for, if the High Court has (a) on appeal reversed an order of acquittal of an accused person and sentenced him to death; or (b) has withdrawn for trial before itself any case from any court subordinate to its authority and has in such trial convicted the accused person and sentenced him to death; or (c) certifies that the case is a fit one for appeal to the Supreme Court. Parliament can empower the Supreme Court to hear and entertain appeals from any judgment, final order, or sentence in a criminal proceeding of a High Court in India.

The Supreme Court has a vast *revisory jurisdiction* over all courts. It can grant special leave of appeal against the judgment of any court or tribunal in the country, other than a Court Martial.

The Supreme Court has also certain *advisory functions.* The President can refer to it any question of law or of fact of public importance. Under this jurisdiction, even those disputes which involve interpretation of treaties or agreements of former Indian States can be referred to it, although the Court has no original jurisdiction over them.

The Court is also vested with powers to issue directions or orders in the nature of the writs of *habeas corpus*, *mandamus*, *prohibition*, *certirari* and *quo warranto* or of any of them, for the enforcement of fundamental rights. The High Courts also enjoy a concurrent jurisdiction with regard to the issue of these writs.

The law declared by the Supreme Court shall be binding on all courts within the territory of India. It may pass any order necessary to do complete justice to any case before it, and its orders are enforceable throughout India. All civil and judicial authorities are constitutionally bound to act in aid of the Supreme Court. Supreme Court is empowered to frame its own rules of procedure.

HIGH COURTS

In each Part A and Part B State, there is a High Court. Parliament may create a High Court in a Part C State, or give any court in a Part C State any of the powers of High Court, or extend or exclude the jurisdiction of a High Court in a Part A or Part B State to or from a Part C State. The first three High Courts were constituted in the three Presidency towns of Calcutta, Bombay and Madras in 1862. The other provincial capitals came to have their High Courts later. A High Court stands at the head of the judicial administration in each State.

The judges of the High Courts are appointed by the Parliament, after consultation with the Chief Justice of India, and the Head of the State within which the High Court sits. Other judges are appointed with the advice of the Chief Justice of the High Court also. A candidate for appointment must for at least ten years have held judicial office, or have been an advocate of a High Court. The judge of a High Court enjoys the same immunity as a judge of the Supreme Court.

While for ordinary purposes a High Court is identified with the State in whose territory it exercises its jurisdiction, the legislature of that State has no power to alter the constitution or organization of the High Court. The Constitution has expressly reserved this power for the Union Parliament. Similarly, the power to remove High Court judges is also vested in Parliament. The special procedure to be followed in this matter is the same as prescribed for the removal of the Supreme Court judges.

The Constitution has not made any substantial changes in the powers and duties of the High Courts. They are more or less the same as prescribed in the Royal Letters Patent and the subsequent enactments which vested in them original or appellate jurisdiction in certain specific matters. The Letters Patent constituting the three Presidency High Courts classified their jurisdiction as original and appellate, both in civil and criminal matters, the original jurisdiction being confined to the respective city limits. The other High Courts did not ordinarily possess original jurisdiction, but had the power to try those cases which, they thought, it was proper to transfer to themselves for special reasons. This was a kind of extraordinary original jurisdiction which they enjoyed. The High Courts were expressly authorised by the Government of India Act of 1935 to transfer suits to themselves when these involved interpretation of the Constitution Act. Article 228 of the new Constitution makes the transfer obligatory in all such cases.

The High Courts are the highest courts of appeal in the States in all matters—civil and criminal. The High Courts have powers of superintendence over all courts and tribunals throughout the territories in relation to which they exercise their jurisdiction. They can call for returns from such courts, make and issue general rules and prescribe forms to regulate their practices and proceedings and determine the manner and form in which their books, entries and accounts shall be kept.

Under the provisions of Article 226, every High Court has the power, throughout the territories in relation to which it exercises jurisdiction, to issue to any person or authority, including any Government, within those territories, directions, orders, or writs, including writs in the nature of habeas corpus, mandamus, prohibition, quo warranto and certiorari, or any of them, for the enforcement of the fundamental rights of the Constitution and for any other purpose.

SUBORDINATE COURTS

The district judges, who preside over the principal civil courts of original jurisdiction, are appointed by the Governor of a State in consultation with the High Court concerned. Appointments of persons other than district judges to the Judicial Service of a State are also made by the Governor after consultation with the State Public Service Commission and the appropriate High Court. The control over district and other subordinate courts, including the posting, promotion, etc., of and grant of leave to persons belonging to the Judicial Service and holding posts inferior to those of district judges, is vested in the High Court.

Subject to minor local variations, the structure and functions of the subordinate or mofussil courts are more or less uniform throughout the country. Each State is divided into a number of districts comprising the territorial limits of the jurisdiction of the principal civil court presided over by a district judge. Below him is a hierarchy of different grades of civil judicial authorities. Some of these enjoy unlimited jurisdiction and some only appellate jurisdiction, while others are entrusted exclusively with original work. The cases of a comparatively simple character involving only modest claims are tried in what is known as the small causes court. In pursuance of an old practice, disputes between landholders and tenants, though of a civil nature, are tried by revenue courts subject to dual control by the higher civil courts and the higher revenue authorities for specified purposes.

Besides hearing suits, properly so-called, the civil courts exercise jurisdiction over several other matters, viz., guardianship, marriage and divorce, testamentary and inter-State representation and admiralty jurisdiction. The last head of jurisdiction is vested in the High Courts. As for the remaining three, the special enactments dealing with each matter also prescribe the courts competent to deal with it. In another category of cases pertaining to the Land Acquisition Act and the Forest Act, etc., questions affecting civil rights are in the first instance dealt with by Administrative Officers or tribunals, but their decisions are subject to the appellate authority of the appropriate civil courts. There is a third group of cases affecting civil rights, which are tried by administrative or quasi-judicial tribunals, or other statutory bodies. In such cases, there is no express provision for appeal to civil courts and the parties frequently invoke the intervention of the High Courts for writs.

Within the limits of the Presidency towns all civil cases would ordinarily come before the High Court, but for a speedy and less expensive system of justice Small Causes Courts have been established. These Courts, subject to certain conditions, deal with money suits, where the amount involved does not exceed two thousand rupees, and in certain cases where both parties agree, suits involving a sum over and above two thousand rupees can be tried there. There is no appeal from the Small Causes Court, though in certain cases the judge can refer to a higher Court. In the districts there are similar courts established, but the limit of cases which may be tried in them is lower than in those of the large towns.

The District and Sessions Judge, besides his duties as a criminal judge, is responsible for the management of all the inferior civil courts within his district, and it is his duty to distribute the work amongst the Courts. Every suit is tried in the lowest Court competent to try it. The subordinate judges are divided into certain fixed classes, and may try cases up to the amount permitted in their class. In some of the States there are village munsifs who may try cases of a petty nature, and subject to the agreement of both parties, matters of a greater importance may be brought before them. There is a right of appeal against decisions of the subordinate judges to the District Court, and in some instances where a large sum of money is involved, to the High Court direct, whilst appeals may be made to the High Court against the original decisions of the District Court, and, on point of law, against its judgment on appeal.

Criminal Justice:

The Code of Criminal Procedure regulates the administration of criminal justice and the Constitution of Criminal Courts. The officer presiding over the district court on the civil side is also, on the criminal side, the judge of the Sessions Division for that District. The Sessions Judge is sometimes assisted by additional or assistant sessions judges. These officers are subordinate only to the High Court and are comparatively independent of the executive. They, however, deal only with the more serious crimes and take cognizance of cases only when they have been committed to them by a magistrate after preliminary enquiry. They try such cases only in the presence of a jury or of assessors.

A judge of a Court of Session, who sits either with a jury, or with assessors may pass any legal sentence, but a death sentence is subject to confirmation by the High Court. An assistant Sessoins Judge may not pass a sentence of imprisonment exceeding seven years. The jurisdiction of each class of magistrates is limited to specified crimes; a magistrate of the First Class may pass a sentence of imprisonment not exceeding two years, or of a fine not exceeding a thousand rupees; a magistrate of the Second Class is similarly limited to six months and two hundred rupees, and a magistrate of the Third Class to one month and fifty rupees. The Sessions Judge is usually the District Judge, and the Stipendiary Magistrates are usually either judges of inferior civil courts or revenue officers.

The Sessions Judge and the District Magistrate both superintend the Courts of Magistrates subordinate to them. Appeals from magistrate of the Second and Third Class lie to the District Magistrate, appeals from other magistrates lie to the Court of Session. Appeals from the Court of Session lie to the High Court. All sentences are appealable except sentences of imprisonment not exceeding one month passed by a Court of Session, or a sentence of fine not exceeding fifty rupees (or two hundred rupees if the case is tried summarily by a magistrate) passed by a Court of Session, District Magistrate, or a Magistrate of the First Class.

A party aggrieved by any order passed in a criminal case may also move the District Magistrate, the Court of Session, or the High Court in revision. The Court of Session and the District Magistrate have limited powers of interference, but they may recommend interference by the High Court.

Panchayat Adalats:

One of the directive principles of State policy lays down that the State shall take steps to organise village panchayats and endow them with such powers and authority as may be necessary to enable them to function as units of self-government. In pursuance of this directive a number of States have passed the necessary legislation and panchayats have already started functioning in some of them.

The judicial wing of the panchayat organization is called the Panchayat Adalat. The system as it exists in the Uttar Pradesh, requires the *Gaon Sabhas*, which consist of the entire population of the village, to elect five trustworthy persons to act on a judicial panel of 25 to 30 persons in a unit of five or six contiguous villages. Every petty case, civil or criminal, arising in the unit is to be referred, in accordance with prescribed rules, to a tribunal of five nominated out of this panel—one or two from the village where the parties reside and the rest from the neighbouring villages. This tribunal makes inquiries locally and decide the cases on the spot. No appeal is allowed against its decision. If gross miscarriage of justice is proved to the satisfaction of a civil judge or a magistrate, he may direct a retrial before another tribunal. Under no circumstances can he substitute the judgment of the Panchayat Adalat by his own.

The Bombay Village Panchayats' Act 1920, provided for a Panchayat in each village, consisting of the headman, the village record-keeper and at least three elected members, but the Chairman is elected by the Panchayat.

Attorney-General of India:

The President is empowered to appoint a person who is qualified to be a judge of the Supreme Court to be the Attorney-General for India. The duty of the Attorney-General is to advise the Government of India upon such legal matters, and to perform such other duties of a legal character as may, from time to time, be assigned to him by the President. In the performance of his duties, the Attorney-General has a right of audience in all courts in Indian territory.

Every State has an Advocate-General, who is appointed by the Governor of a State. An Advocate-General for the State should have the qualifications to be a judge of the High Court. His duties in relation to the State are the same as those of the Attorney-General to the Union.

NATIONAL DEFENCE

Recent History—The partition of armed forces on August 15, 1947, involved complete reorganisation of India's armed forces. Notwithstanding all sudden and unexpected interruption, the Army has steadily grown into a powerful machine. Almost completely nationalised, there are at present hardly any non-Indians in the Army holding operational appointments. Recruitment to the Army has been thrown open to all irrespective of caste or creed, and no class is debarred from joining it. Entry into the army is governed by merit alone.

Defence Organisation—Important changes have been introduced in the Defence Organisation. As a first measure, steps were taken to make civilian control supreme over the military wing. Till September, 1946, the Commander-in-Chief was the Supreme Commander and head of all the three services, besides being a member of the Governor-General's Executive Council as Defence Minister. But in the Interim Cabinet a popular representative assumed charge as Defence Minister although the Commander-in-Chief continued to remain the head of the three services.

After 15th August, 1947, there was a further fundamental change. From that date, each Service was placed under their own Commander-in-Chief. The heads of the three services were thus designated Chief of the Army Staff and Commander-in-Chief of the Army, Chief of the Naval Staff and Commander-in-Chief of the Indian Navy and Chief of the Air Staff and Commander-in-Chief of the Indian Air Force. Furthermore, steps have been taken to establish the principle of civilian control over the Armed Forces. All policy decisions are now taken by the Defence Committee of the Cabinet prescribed over by the Prime Minister. This is linked up with a network of Committees in the Defence Ministry at various levels.

Indianisation in the Services—By Jan. 1, 1948 Indian officers were in command of all operational formations and units of the Indian Army. It is partinent to note that the army of undivided India had over 10,000 British officers. The following year their numbers was reduced to about 400. In the technical arms, such as Artillery and Signals there was no Indian holding the rank of Brigadier on August 15, 1947. The percentage of Indians was raised to 80 p.c. by April of the following year. To-day very few British officers are serving in the Indian Army. Since Jan., 1948 every year there has been progressive reduction in the number of British officers. Although in the Navy and Air Force are at present headed by British Officers, the progress of nationalisation is proceeding in these two services also as fast as circumstances permit.

Inter-Service Organisation—Effective inter-services co-operation is being promoted through the provision of common basic training to the future officers of the three Services at the National Defence Academy, the new building for which are being enected at Khadakvasla near Poona. Meanwhile, a joint services wing has been added to the Military Academy at Dehra Dun, renamed National Defence Academy. A Staff College has also been established at Wellington which offers post-graduate courses in military science, tactics and strategy.

Reorganisation Programmes—The Defence Ministry of the Government of India has taken in hand ambitious development and reorganisation programmes, the most important items of which are as follows :—

1. *Organisation of a new Command.*

2. *Establishment of a National Academy* to train the future officers of the three services ; The academy is being constructed at Khadakvasla, near Poona. The annual intake of cadets will provisionally be 500 and the course of training for entry into permanent cadre of commissioned ranks in the three services will extend over four years.

3. *Formation of new training establishments* in place of those lost by partition and also to meet the growing needs of India, *e.g.*, Staff College, School of Military Engineering, Naval Training establishments ;

4. *Development of Ordnance Factories* ; Efforts for self-sufficiency in the matter of arms and equipment which perhaps is, at present, the services' greatest need have continued unabated. The most important step in this direction was the opening of Prototype Factory, Ambernath. The factory will produce prototypes for new defence equipment

5. *Military Science*—In order to meet country's defence requirements, a *Defence Science Organisation* has been created under *Scientific Adviser*. In this connection, the Government has set up a Policy Board and an Advisory Committee.

Defence Science Laboratory has been started in the building of the National Physical Laboratory at Delhi. A *Psychological Research Organisation* has been created in the three services as a part of Defence Science Organisation.

6. *Organisation of liaison and procurement office* in the U.K. under the High Commissioner of India for all the three services :— A strong organisation in the U.K. to look after the procurement of defence stores and equipment from abroad, known as *Armed Forces Liaison and Procurement Organisation* has been created in the High Commissioner of India's Office in U.K. The liaison organisation has three cells, one for each service which always keeps in touch with Service Ministries of England.

7. *Modernization and strengthening of India's naval fleet* by acquisition of new vessels :—First significant step towards modernization of Indian Navy is the acquisition of a 7,000 ton cruiser of the Leander class, *Delhi* modernised with the latest weapons and equipment like radar. Three destroyers have been acquired from the U.K., namely, *Rajput*, *Ranjit* and *Rana*.

8. *Strengthening of India's Air Force.*

9. *National Cadet Corps*—In order to build up a reserve force to be called into service in a national emergency, *Territorial Army* and a *National Cadet Corps* have been formed.

National Cadet Corps—On April 8, 1948, the Indian Parliament passed the *Indian National Cadet Corps Act* with the object of (*a*) developing character, comradeship, idea of service and leadership in the youth, (*b*) giving the youth of the country basic military training and training in the weapons and equipment of three Services and thus attracting suitable young men to join country's armed forces, (*c*) stimulating interest in the defence of the country and (*d*) building up a reserve of leaders to enable the armed forces to be expanded rapidly in a national emergency. Girls' Division have also come into being.

The N.C.C. is entirely voluntary, with no liability for services in the Armed Forces. There is no direct financial inducement to those joining the Corps.

10. *Indian Territorial Army*—On September 1, 1948, was passed the *Indian Territorial Army Act* primarily (*a*) to build up a reserve force to be called into service in a national emergency, (*b*) to be a second line of defence to reinforce the regular army as and when the occasion demands (*c*) to guard the home front, half keep the supply and communication lines open, man the coastal defence and assist the civil administration in preserving internal order. The territorial army will be maintained on zonal basis in 8 zones and will comprise technical and administrative units pertaining to all arms and services of the Regular Army to form a balanced force by itself. Every individual joining the Territorial Army will be required to undergo a period of intensive training for a month or two every year and a certain number of parades each month. The age limit in the Force will vary from 18 to 35.

Auxiliary Territorial Army—The formation of Auxiliary Territorial Army was announced in 1953. The new scheme provides opportunity to a large number of able-bodied Indians between ages of 18 and 40 to get military training without a liability for military service. Unlike those who join the territorial army, the members of the Auxiliary Force will have no liability for military service, but they will be required to abide by the disciplinary rules of the camp during the period of training. The Auxiliary Territorial Army will undergo continuous training for seven days in a camp of about 700 trainees. The training consists of drill, elementary field engineering, physical training, musketry and rifle shooting, use of ground and field craft, first aid and hygiene.

11. *Integration of Indian States Forces*—On the 1st April, 1950, Armed Forces of India were completely unified. The Government of India assumed complete financial responsibility for and overall control of the former Indian State Forces. In the case of the State Forces of Travancore-Cochin, Mysore and Hyderabad, complete control, administrative as well as operational, has been assumed by the Indian Army and Indian Army officers have been appointed commandants of these forces.

INDIAN ARMY

Set up of the Indian Army—The Indian Army consists of Regular Army and certain other forces which act with Regular Army on certain occasions. These forces are the Reserve Forces and the Territorial Army. They act as second line of defence. The Regular Army consists of officers, junior commissioned officers, warrant officers and non-commissioned officers and other enrolled persons who are liable to render continuously for a term of military service to the Union of India in every part of the world or in any specified part if it.

There are two classes of Reserve Forces, naming the *Indian Reserve Forces and the Indian Supplementary Reserve Forces.*

Some States have been empowered to raise *Home Guards.* Such as Madras Home Guards recruited under Madras Home Guards Act 1948 and *National Volunteer Force* of West Bengal.

In the Regular Army, the term "officer" is applied to a commissioned officer and does not include a junior commissioned officer. The commissions for both these classes of people are granted by the President of India. Next in order after officers and junior commissioned officers are warrant officers who are also appointed by the President. Below the warrant officers are the non-commissioned officers and the last to come in the series are the enrolled soldiers. All these persons are subject to the Indian Army Act.

Excepting for officers, junior commissioned officers and warrant officers, the entrance to the Regular Army is by enrolment. The service of every member of the Army, whether as officer or otherwise is liable to be terminated at the pleasure of the President. So a member of the Army may be dismissed, discharged, retired, removed or released. In any of the above cases he has no right to complain of wrongful dismissal or ask for compensation for it in a court of law.

Army Headquarters and Commands—The Army Headquarters functions directly under the Chief of the Army Staff and the Commander-in-Chief, Indian Army. It is divided into the following main branches which are again further sub-divided into directorates—(1) General Staff Branch, (2) Adjutant-General's Branch, (3) Quartermaster-General's Branch, (4) Master-General of Ordnance Branch, (5) Engineer-in-Chief's Branch, (6) Military Secretary's Branch.

Under the Army Headquarters, the Army is organised into Commands; each command under a General Officer Commanding-in-Chief of the rank of Lt.-General. The commands are divided into areas, each under the command of a G.O.C. of the rank of Major-General and the areas in their turn are sub-divided into sub-areas under the command of a Brigadier. These are static formations.

India is now divided into the Commands—*Eastern Command, Southern Command* and *Western Command.*

Important Wings in the Indian Army—The Important services in the Indian Army are—*Armoured Corps, Artilery, Engineers, Signals and Infantry.* For the supply of munitions of war to the Army there is *Indian Ordnance Corps* and for the organisation of the Commissariat there are *Indian Army Service Corps* and *Indian Electrical* and *Mechanical Engineers.*

1. Indian Armoured Corps is organized into two types of units —(*a*) *Tank Units* and (*b*) *Armoured Car Units.*

2. Indian Artillery has following categories—(*a*) *Field, Heavy and Mountain Regiments,* (*b*) *Heavy Anti-Aircraft Regiments,* (*c*) *Light Anti-Aircraft Regiments,* (*d*) *Anti-Tank Regiments,* (*e*) *Anti-Aircraft and Anti-Tank Regiments,* (*f*) *Coast Regiments* and (*g*) *Survey Regiments.*

3. Indian Engineers fall into three categories—(*a*) *Field Units,* (*b*) *Lines of Communication Units* and (*c*) *Specialized Companies.*

4. Indian Signals Service comprise wireless telephony, and telegraphy, line telephony and telegraphy, visual telegraphy, message carriers and a pigeon service.

5. Indian Infantry—main types of infantry units are—(*a*) *Infantry Battalions*, (*b*) *Machine-gun Battalions*. Separate Motor Battalions which form an essential part of armoured brigades are also attached to the Infantry.

6. Indian Army Ordnance Corps—may be broadly described as the agency whose duty it is to supply the army with munitions of war at and also clothing and general stores other than engineering stores. The different varieties of stores are—(1) Vehicles and their maintenance stores, (2) Engineering Stores, (3) Field Artillery Stores, (4) A. A. Artillery Stores, (5) Small arms and machine guns, (6) Ammunitions, (7) Scientific Stores and (8) General Stores and Clothing.

The Ordnance Units also include Mobile Laundries, Bath Units, Mobile Cinemas, Mobile Ammunition, Inspection and Repair Units and Ordnance Beach Detachments.

7. Indian Army Service Corps consists (*a*) *Supply*, (*b*) *Transport*, (*c*) *Petrol*.

8. Indian Electrical and Mechanical Engineers for inspection and maintenance of wheeled vehicles, tank, artillery, small arms, wireless radio location, fire control and all other instruments, repairs of all equipments, and investigation defects of design and recommendation for improvement.

9. Other branches in the Army include—(a) *Army Educational Corps*, (b) *Intelligence Corps* for obtaining information from every possible source, (c) *Military Medical Services*, (d) *Indian Army Veterinary Corps*, (e) *Corps of Military Police*, (f) *Movement Directorate* which is responsible for the direction of military movements in war and for the co-ordination of military movements among various carrying agencies and services, (g) *Military Farms Department* for the management of military farms, (h) *Indian Canteen Corps*, (i) *Indian Pioneer Corps* consisting of unskilled labourers for work in air fields, building camps, road making, etc., (j) *Military Accounts Department* deals with pay and accounts of the Indian Army.

INDIAN NAVY

The history of the Indian Navy dates back to 1613 when the Indian Marine was constituted as a fighting force of the East India Company. In 1685 the name of the service was changed to Bombay Marine, by which name it was known till 1830. After the World War I in 1928 the service was reconstituted on a combatant forting. Six years later the Indian Navy Discipline Act was passed by the Indian Legislature and an September 8, 1934, the Royal Indian Navy came into being. During Second World War the Navy expanded from a force if 2,000 officers and men to a total strength of 30,000 and modern ships began to be added to the fleet.

Before the dawn of freedom August 15, 1947—India could hardly be said to have a Navy of its own. What small forces of ships and escot vessels existed were merely an adjunct to the Royal Navy.

August 15, 1947 found this small force further reduced owing to the partition of the country in which roughly one third of it went to Pakistan together with three of the most important naval establishments.

Plans for expansion of the Navy were immediately taken in hand by the Government of India. Before the year was out Government of India purchased from Great Britain 7,030 ton battleship Achilles which was renamed *Delhi*; which became India's flagship. The acquisition of *Delhi* was followed in the next year by the purchase of three destroyers from Britain which were renamed *Rajput*, *Ranjit* and *Rana*. With these were formed India's first destroyer flotilla. Simultaneously, with frigates *Jumna*, *Sutlej*, *Kistna* and *Cauvery*, which came to India's share after partition, a frigate flotilla was formed, to which was also added another frigate *Tir*.

A new post designated the "Admiral Afloat" in charge of all ships of the Navy at sea was created.

The Indian Naval Squadron to-day thus consists of a cruiser, a Destroyer Flotilla and a Frigate Flotilla. The twelve fleet minesweepers are *Rohilkund*, *Rajputana*, *Orissa*, *Madras*, *Konkan*, *Kumaon*, *Deccan*, *Carnatic*, *Bombay*, *Bihar*, *Bengal* and *Khyber*. There are also four trawlers, *Amritsar*, *Barg*, *Calcutta* and *Nasik*. Apart from these there are two motor minesweepers.

It is the aim of the Defence Department to build up a carrier Task Force with front line carrier air groups with a strength of 54 aircraft as a striking force. This would form the nucleus of the Fleet Air Arm for the Indian Navy. The Task Force would protect merchant navy convoys, help the army in amphibious operation, and in attacking enemy posts.

Organisation—Naval Headquarters is at Delhi. The head of the organisation is the Chief of the Naval Staff, and the Commander-in-Chief of the Indian Navy. The operational and administrative authorities are at Delhi. The command of the various naval and shore establishments is exercised by the C.-in-C. of the Indian Navy through staff channels, of four Operational and Administrative Authorities—one afloat and three ashore.

There are about four important Shore Establishments. All ships have to call at the dry docks sometime or other for overhauling or repair. This key post is of Captain Superintendent of the Naval Dockyards at Bombay. A very important shore establishment is "Commodore in Charge of Bombay," shortly known as Combay.

Naval Units of the N.C.C.—Naval Units of the National Cadet Corps has been inaugurated in 1952. Its object is to make the youth of the country naval-minded and to impart pre-entry naval training. These will be a unit of the senior division and the other two of the junior division of the N.C.C.

The year 1953 saw the inauguration of the Navy's first air station as *Garuda* and the setting up of a shores-based fleet requirement unit. The primary funection of the unit is to provide air training facilities for the personnel of the fleet and the training establishments of the Navy.

Naval Training—At home, the principal training establishment India got on partition—I.N.S. "*Shivaji*," the Mechanical Training Establishment at Lonavla near Bombay, and I.N.S. "*Valsura*," the Electrical School at Jamnagar, were expanded. In 1948, two new training centres were opened—I.N.S. "*Venduruthy*" at Cochin and I.N.S. "*Circars*," the Boys Training Establishment at Visakhapatnam.

To the Cochin centre, rightly described as "the cradle of the Indian Navy," goes the credit for having trained a large number of Direct Entry officers and men to fill in the gaps in naval personnel. To-day it is the largest I.N. training centre, with courses in Seamanship, Gunnery, Signals, Torpedo and Anti-Submarine, Supply, Secretariat and Cookery.

Meanwhile, the Indian Military Academy at Dehra Dun (now known as the National Defence Academy) was re-organised in January 1949, so as to provide the initial training to future regular officers of the Navy. They are later sent to the United Kingdom for a further period extending over 4 to 6 years.

New Name & Ensign—On January 26, 1950, came a change in the name of the Navy which was of considerable significance. On that day it dropped the title 'Royal' which had been associated with it for long and since then it came to be known, as the Indian Navy with the White Ensign yielding place to the Indian Navy Ensign at all Naval establishments and ships.

Similarly, in the crests of the Indian Navy, the old Tudor Crown was replaced by the Asoka Lions and the former Star of India by the Lotus.

The next epoch-making event in the history of the Indian Navy took place on May 27, 1951. On that day, the President, Dr. Rajendra Prasad, as the Supreme Commander-in-Chief of India's Armed Forces, presented the President's Colour to the Navy at a ceremony in Bombay.

INDIAN AIR FORCE

Birth & Progress—The 'germ idea' for India having her own Air Force originated with recommendation of the Skeen Committee in 1926.

On the outbreak of World War II rapid development of the Indian Air Force was swiftly carried out, and by 1940 Coastal Defence Flights had been organised at Bombay, Calcutta, Madras, Cochin and Karachi. Manned by the Volunteer Reserve of Officers, mostly Indians, these flights were entrusted with the task of defending the 8,000 mile long Indian coastline.

The Present Set-up—From August 15, 1947 Indian Air Force has become independent service under Defence Ministry and is no longer under the Commander-in-Chief of India as in British days. Indian Air Force is now under the command of the Chief of Air Staff and C-in-C, I.A.F.

Air Force Branches—Officers of the Indian Air Force are divided into following branches—(1) *General Duties (Flying)*—It is composed of Air crews, that is to say pilots, navigators and wireless operators or Air gunners. (2) *Technical*—This branch consists of four sections *i.e.*, Engineering, Signals, Armaments and Electrical Engineering. (3) *Equipment*—This branch deals with all stores, except stationery and fuel. (4) *Administrative and Special Duties Branch*—The branch includes following sections—Administrative, Codes and Cipher, Catering, Intelligence, Link Trainer, Motor Transport, Photo and Miscellaneous. (5) *Meteorological*—This is a specialised branch dealing with the preparation and distribution of information rearding flying conditions. (6) *Education Branch*—Organises and conducts general and technical education for all ranks and cadets under training. (7) *Legal.*

I.A.F. Training—*The Advanced Flying School at Ambala* and the *Elementary Flying School at Jodhpur* are known as No. 1 and No. 2 Air Force Academies imparting complete training to pupil pilots. The *Initial Training Wing at Coimbatore* has been organised and is known as No. 3 Air Force Academy and trains officers for ground duty. A *Radar School* has been started. A *Technical Training College* has been opened in 1949 at Jalahalli, near Bangalore combining the courses of air force, engineering for officers and apprentices. There is also a *Navigators' Training School at Jodhpur* to overcome the present shortage of navigators in I.A.F. A *Flying Instructors' School* and a *Paratroopers' School* are other links in the chain of I.A.F. training establishments. *The Base Repair Depot at Kanpur* is for the overhaul and major repairs of aircraft. Foundation stone has been laid in 1950 of the first permanent I.A.F. Station at Agra.

OFFICERS' RECRUITMENT AND TRAINING

Army Training—Armed Forces Academy, Dehra Dun (Inter-Services Wing)—pending the starting of National Academy at Kharakvasla, near Poona, an Inter-Services Wing has been started at the National Defence Academy, Dehra Dun. There are two Wings at this Academy—one, Inter-Services Wing for training of Officer Cadets for all the three services and other, the Military Wing to which cadets for the Indian Army only are admitted. Here courses are at present being conducted to train youngman for commissions in the three services. Other Inter-services training institution is the *Staff College* at Wellington.

An Institute of *Armament Studies*, the first of its kind in India was established at Kirkee early in 1952. The Institute is intended to give to officers basic training in science and technology as applied to armaments. An important function of the institute is to maintain contacts with the universities and other certain research institutions and to promote, in all possible ways, the dissemination of basic knowledge in defence science.

Recruitment to Indian Army—There are at present three different systems of recruitment, in addition to the recruitment through Inter-Services Wing above-mentioned :—

(*a*) The recruitment of *cadets for the Military Wing and for the special cources for technical graduates* of the National Defence Academy, Dehra Dun. Those cadets are granted permanent Commission.

(*b*) Grant of Short Service Commission for three to five years in technical branches only—Short Service Commissions for a period of three years extendable at the discretion of the government are granted to civilians with engineering qualifications. The age limit is from 20 to 45 years.

(*c*) *Temporary Commission*—In order to meet overall shortage of officers in the Indian Army, it has been decided to grant Temporary Commission for one year (extendable at the discretion of the government) to suitable candidates of age between 20 and 45 years.

Recruitment to Indian Navy—There are two distinct methods of recruitment to the commissioned ranks of the Indian Navy in addition to the recruitment through the Inter-Services Wing of the Armed Forces Academy. One is through entry as cadets and the other is direct entry in Commissioned Ranks. Cadets enter the permanent cadre of the Service. Direct entrants in commissioned ranks are initially engaged on short service commissions of 5 years' duration except in the case of the Instructor's Branch where permanent commissions are granted.

Cadets Entry—The recruitment of Cadets are made to (*a*) Executive, (*b*) Engineering, (*c*) Electrical and (*d*) Supply and Secretariat branches: Candidates should be between the 17½ and 19½ years of age and should have passed Matric or any other recognized equivalent examinations. They will be selected through Public Service Commission and Services Selection Board. After completion of the preliminary training in India, cadets are sent to United Kingdom to complete their training.

Direct Recruitment in Commissioned Ranks—The branches to which direct recruitment in commissioned ranks is at present made are (1) Executive, (2) Engineering, (3) Electrical, (4) Supply and Secretariat and (5) Instructor.

Recruitment to I.A.F.—Recruitment of the I.A.F. general duties (flying) branch is open to candidates between the ages of 17½ and 21 years, possessing good eye sight (6·6) and having a high standard of physical fitness. The minimum educational qualification is matric or its equivalent. The training covers a period of two years given at three successive schools, *viz.*, Initial Training Wing at Coimbatore, Elementary Flying Training School, Jodhpur and the Advanced Flying Training School at Ambala. At the conclusion of their training cadets are commissioned in the I.A.F. general duties branch as pilots in the rank of Acting Pilot Officers.

MEDICAL SERVICES

The evolution of Indian medical corps, as it exists to-day, extends over on period of more than three centuries. In the spring of 1943 the different elements of that medical services were combined to form the *Indian Army Medical Corps*. With the formation of

I.A.M.C. the medical service with its own officers and men came into being as a single body and began to grow rapidly as a well-knit, well-trained and efficient Corps. Another revolutionary step was taken soon after the World War II when the medical services of the Army, Navy and Air Force were integrated under one Director-General, Armed Forces Medical Services. The medical services have now an Armed Forces Medical College, a medical research organisation and training centres where members of the Corps receive up-to-date training. The A.M.C. officers qualify at the Staff College at Wellington by entering the college through normal competitive examinations.

MISCELLANEOUS

Free India's New Gallantry Awards—The details of new military awards are as follows:—

"Param Vir Chakra"—the highest decoration for gallantry, will rank next only to the Victoria Cross and will be awarded for the highest form of bravery in the presence of the enemy.

Mahavir Chakra and Vir Chakra, the second and the third awards are given for service in the presence of the enemy, and rank next to the D.S.O.

Fourth award is the *"Mention in Despatches"* for acts of gallantry of distinguished service in operations against the enemy or under conditions equivalent to service against enemy which are not of such high order as to merit the award of *Vir Chakra* but still deserving recognition.

Monetary benefits attaching to the three awards, for which commissioned officers will not be eligible, will be Rs. 50, Rs. 30 and Rs. 20 per month, respectively. Higher allowances will be admissible to junior commissioned officers who have won certain previous awards.

Armed Forces Badges—Asoka's three lions has now replaced the Crown in Army badges of rank and its miniature replica is used as a distinction.

Disappearance of Word "Royal" and Indian Naval Ensign—From 26th Jan. 1950, the Navy dropped the "Royal" from its title. The British white Ensign was replaced by the new Indian Naval Ensign—with Tricolour in the place of Union Jack. Similarly the expression "His Majesty's Ship" before the names of vessels of the Navy has been dropped and the words "Indian Naval Ship" substituted.

Military Educational Institutions—The main educational institutions connected with the military education of the country—(1) *Lawrence Schools* at Simla, Nilgiri Hills, and Mount Abu for the benefit of the children of the soldiers to a limited extent. (2) *King George's R. I. Military College* at Jullundur, Ajmer, Belgaum and Bangalore for providing education to the sons of Indian soldiers. (2) *School of Foreign Languages at New Delhi*, started in 1949 to impart certain foreign languages to officers of the Armed Forces. (4) *School of Military Engineering* started in 1943. (5) *Armed Forces*

Medical College, Poona. (6) *Staff College*, newly started at Wellington in Nilgiri Hills. (7) *Air Technical College* to be started.

INDIA'S NATIONAL INCOME

A National Income Committee was appointed by the Government of India in August 1949. The Committee was aided by a panel of distinguished foreign advisers. The report was published on April 1951. It is regarded as the first authoritative estimate of India's national income. The estimate is, however, provisional, because, in the words of the report itself—"First, the figures are in many cases based on material the reliability of which is not known, or in other cases on calculations involving assumptions the validity of which is uncertain. Secondly, it was not possible to make many of the desired breakdowns of the national income for lack of relevant material." It must also be stated that the estimate was made before 1951 census.

We must also take into account the basic facts about Indian economy when looking into the National Income figures. The two important points to remember are (1) that a major portion of the economy consists of household enterprise, (2) that a large portion of commodities and services in India does not enter into the market at all, and is not, therefore, subject to monetary transactions.

Subject to all these defects, the Committee estimates the "net national product at factor cost for 1948-49 at Rs. 8,711 crores. This gives an income per capita (assuming the population at that year at 341 million which is an under estimate, for 1951 census returned a population of 356·8 million) at Rs. 255.

The distribution of the net national income according to industrial origin is estimated as follows:—

Industry	p.c.
Agriculture ..	47·6
Commerce, transport & Communications ..	19·5
Mining, manufacturing and hand trades ..	17·2
of which small enterprises	9·9
Factory establishments	6·6
Other enterprises ..	15·9
of which Govt. service ..	5·3
	100·2

(including 2 p.c. earned income from abroad).

Another estimate attributes 61·3 per cent of the net domestic product to small enterprises, largely household, and only 12 per cent to larger enterprises including plantations, forestry, mining, factories, communications, banking and insurance.

The 1951 census recorded agricultural classes, including all their dependents, as 70 per cent of the whole population, commercial classes as 5 per cent and persons engaged in transport as 1·4 per cent.

NATIONAL INCOME : (1948-49)

		341·04 milns.
Net national income	Rs.	8,710 crores
Per capita income	„	255

Net domestic product at factor cost	„	8.730	crores
Net national product at market prices	„	9,170	crores
Net output per engaged person in Agriculture	„	500	
Mining and Factory establishments	„	1,700	
Small enterprises	„	600	
Commerce, transport and communications	„	1,600	
Professions (including miscellaneous services)	„	600	
Government services (administration)	„	1,300	
Domestic service	„	400	
Net output of			
Government enterprises	„	300	crores
Government administration	„	460	„
Private sector	„	7,970	„
Government share in national expenditure	„	840	„
Government draft on private income	„	690	„

In 1949, India's national income was Rs. 8,710 crores. The average per capita income was Rs. 255. The Report of the Consultative Committee on the Colombo Plan, prepared at its fourth meeting held at Karachi in March, 1952, gives Rs. 10,400 crores as the estimated national income of India in 1950-51. The Colombo Plan envisages that the gross national product of India may be expected to reach around Rs. 11,500 crores at current prices by 1956-57. The Five Year Plan however gives the estimate of national income of India in 1950-51 as approximately 9.000 crores, and states that the national income will have gone up to about Rs. 10,000 crores by 1955-56. On the basis of the National Income Committee's Computation, the total income for 1951-52 may be estimated at Rs. 10,239 crores, as under:—

		(Rs. crores).
(1)	Agriculture, animal husbandry etc.	5,090
(2)	Forestry	64
(3)	Fishing	22
(4)	Mining	63
(5)	Factory establishments	750
(6)	Small enterprises	1,062
(7)	Communications	32
(8)	Railways	240
(9)	Organised Banking and Insurance	54
(10)	Other Commerce and Transport	1,670
(11)	Professions	315
(12)	Government services	160
(13)	Domestic servants	180
(14)	Fixed property	537
	Total Rs.	10.239

On this basis, the average annual *per capita* income comes to about Rs. 284.

Five Year Plan—The objective of planning in India must be to double *per capita* income as early as possible. There are three factors to be taken into account in this connection: (*a*) the rate of growth of population, (*b*) the relationship between investment (*i.e.*, capital formation) and increase in national output, (*c*) the proportion of the increase in national output that can be devoted to investment. In the present Five Year Plan, capital formation is estimated to rise by about 20 p.c. of the additional national income each year. The internal resources thus available will, to some extent, be supplemented by external resources. By 1955-56, national income will have gone up to about Rs. 10,000 crores *i.e.*, by about 11 per cent. If, from 1956-57 onwards, investment is stepped up each year by about 50 per cent of the additional output, it would be possible, on the assumptions, mentioned above, to double *per capita* incomes in about 27 years from now *i.e.*, by 1977.

Comparison with other Countries—According to the United Nations Organisation statistics, India occupies a high place in the world as far as total National Income is concerned.

It is not however the *total* but the *per capita* income that really gives the idea about the economic condition in a country. The The following fingures give the idea of total national income and also *per capita* income :—

Total National Income

	Crores of Rs.		*Crores of Rs.*
U. S. A.	10,84,15	Canada	58,98
U. S. S. R.	2,97,50	Italy	54,00
U. K.	1,94,61	Japan	41,30
France	99,28	Switzerland	27,13
India	97,86	Australia	26,87
Germany	76,50	Denmark	14,54
Canada	58,98	New Zealand	8,05

Per Capita Income

	Rs.		Rs.
U. S. A.	7,265	Germany	1,600
Canada	4,350	U. S. S. R.	1,540
New Zealand	4,280	Japan	500
U. K.	3,865	India	285
Denmark	3,445	Pakistan	255
Australia	3,395	China	135
France	2,410		

FIVE YEAR PLAN

Objective—The central objective of planning in India is to raise the standard of living and opening to the people opportunities for a richer and more varied life. It must therefore aim both at using more effectively the available human and material resources, and at reducing inequalities of income, wealth, and opportunity. Although in the initial stages of the Plan, the emphasis must be on the increased production, planning should not be confined to stimulating economic activity within the existing social and economic framework;

the framework itself had to be remoulded so as to secure progressively for all members of the community full employment, education, security against sickness and other disabilities and an adequate income.

Increase in National income—The present *per capita* income in India is particularly low, and the objective must be to increase it substantially—preferably to double it—as early as possible. In this connection, three important factors had to be considered by the Commission—(*a*) the increase of population which was at present at the rate of about 1¼ per cent per annum, (*b*) the relation between investment and output, and (*c*) the proportion of the increase in national output that could be devoted to investment.

In the present Five Year Plan, capital formation (*i.e.*, the use of resources for building up such production equipment as factories, machinery, irrigation and power facilities etc.) was estimated to rise by about 20 per cent of the additional national income each year, whilst the internal resources thus becoming available would, to some extent also be supplemented by external resources. It was estimated that by 1955-56 the national income would have risen to about 100,000,000,000 rupees *i.e.*, by about 11 per cent. If, from 1956-57 outwards, investment was increased each year by about 50 per cent of the additional output, it would be possible to double the *per capita* income by 1977.

Increase in employment—A substantial increase in the volume of employment was a major consideration, but a programme of full employment at rising real wages could be effective only as capital formation in the country rose. The Plan envisaged progress in this direction through the expansion of irrigation, power, basic industries, transport, and other services, but emphasized that aggregate investment would have to be increased continually in the succeeding periods if employment opportunities in the economy were to expand rapidly. It was also tressed that, while the elimination of unemployment in an under-developed economy was, by its very nature, a long-term problem, the immediate problems raised by unemployment had to be approached from a broad social point of view, *e.g.*, proper safeguards had to be found against excessive unemployment arising out of a process of technological change.

Role of the State—The part played by the State would be a crucial one, and while this need not involve complete nationalisation of the means of production or the elimination of private agencies in agriculture or industry, it would mean a progressive widening of the public sector and a reorientation of the private sector to the needs of a planned economy. The plan emphasised the possibilities inherent in a cooperative form of organisation, specially in the fields of primary production, cottage industries, and marketing and said that such institutional changes as would be initiated in the period of the Plan had been framed with two objectives in view—(*a*) the progress as far as possible towards social objectives defined in the Plan and (*b*) to remove deficiencies in organisation so as to make possible foster progress in the future.

Necessity for controls—The fullest mobilization of the available resources and their allocation so as to secure optimum results had to be carried out to a large extent through price policy. The early stages of a development plan necessarily increased money income faster than production, and thereby led to the dangers of inflation and economic instability, necessitating both physical and financial controls in order to bring about the desired allocation of resources, to keep down prices, and to ensure an exchange of goods between different sections of the community on fair terms; it also believed that inequalities of income and wealth would have to be reduced, in which connection it referred particularly to the efficacy of death duties.

COST OF THE PLAN

Available Resources—In assessing the resources for financing the Plan, the Commission observed that, although public expenditure of about 20,690,000,000 rupees was planned, conditions must be created whereby the necessary development in the private sector were not impeded. The development of irrigation, power, and transport would take up the bulk of the resources available to the public sector, so that progress in the industrial field would depend to a great extent on the efforts in the private sector, although the State had special responsibility for developing such key industries as iron and steel, heavy chemicals and electrical equipment.

The Commission estimated that normal budgetary resources would provide about Rs. 12,580,000.000 of the 20.690.000,000 of expenditure planned, whiles a further Rs. 1,560,000,000 had already been received from such external sources as International Bank. U. S. A. Canada, Australia, New Zealand etc. The balance of Rs. 6.550,000,000 would have to be met either from additional external assistance or by additional taxation and borrowing, as well as from deficit financing, which was visualised to the extent of Rs. 2,900,000,000. In earlier stages of development, external assistance could be a significant factor in eliminating bottlenecks and in helping to avoid dislocations which might have far-reaching consequences.

The following table gave a breakdown of Rs. 12,580,000 estimated to be available for financing the plan from normal budgetary resources with corresponding figures for 1950-51.

	Base year 1950-51			Plan period 1951-56		
	Centre (including Part C States)	Part B & C States & Kashmir	Total	Centre (including Part C States)	Part A & B States & Kashmir	Total
			(Million of Rupees).			
Public savings from:—						
(a) Current Rev. ..	710	510	1,220	1,600	4,080	5,680
(b) Railways ..	230	—	230	1,700	—	1,700

Private savings absorbed through—						
(a) Loans from public	110	80	30	360	790	1,150
(b) Small savings and other funded debt.	420	—	420	2,700	—	2,700
(c) Deposits, funds, other miscellaneous sources ..	—	380	380	900	450	1,350
Total ..	1,250	970	2,220	7,260	5,320	12,580

Distribution of expenditures between Economic Sectors—The distribution of expenditures in the development programme for the public sector is summarized below—

	Rs. crores	*p.c. of total*
Agriculture and Community Dev. ..	361	17·5
Irrigation	168	8·1
Multi-purpose irrigation & power projects	266	12·9
Power	127	6·1
Transport & communications	497	24·0
Industry	173	8·4
Social services	340	16·4
Rehabilitation	85	4·1
Others	52	2·8
	2,069	100·0

The Commission explained that the outlay would be divided as follows—

(1) outlay which would add to the stock of productive capital owned by the Central and State Governments—Rs. 11,990,000,000;

(2) outlay which would contribute to the building up of capital in the private sector:—

  (a) expenditure on agricultural and rural developments excluding community projects and provision for scarcity-affected areas)—Rs. 2,440,000,000;

  (b) loans for transport and industry—Rs. 470,000,000;

  (c) provisions for stimulating local development (community projects and local works)—Rs. 1,050,000,000.

(3) Outlay on social capital—Rs. 4,250,000,000;

(4) outlay unclassified above (including provision for scarcity-affected areas)—Rs. 490,000,000.

Thus about 60 per cent of the planned outlay would result directly in the creation of productive capital in the ownership of Central and State Governments, while the remaining 40 p.c. would partly add to the productive equipment in the private sector, partly provide assistance in the form of working-capital or of advisory and administrative services, partly help to maintain and expand social services and partly act as an incentive for community effort in development.

Distribution of Expenditure between Centre and States—The distribution of total outlay between the Central and State Governments (excluding Rs. 130,000,000 for Kashmir) is shown below—

(*Millions of Rupees*)

	Centre	Part A	Part B	Part C
Agri. & Community Dev. ..	1,863	1,273	376	87
Irrigation & Power ..	2,659	2,061	815	35
Transport & Communications ..	4,095	565	174	88
Industry ..	1,467	179	71	5
Social services ..	1,914	1,923	289	104
Miscellaneous ..	407	100	7	—
	12,405	6,101	1,732	319

The proposed shares of various States (excluding Kashmir) are indicated in the following table—

(*Millions of Rupees*)

A States	
Assam	174·9
Bihar	572·9
Bombay	1,464·4
M. P.	430·8
Madras	1,408·4
Orissa	178·4
Punjab	202·1
U. P.	978·3
W. Bengal	691·0
	6,101·2

B States	
Hyderabad	415·5
M. B.	224·2
Mysore	366·0
Pepsu	81·4
Rajasthan	168·2
Saurashtra	204·1
Tra-Cochin	273·2
	1,732·6

C States	
Ajmer	15·7
Bhopal	39·0
Bilaspur	5·7
Coorg	7·3
Delhi	74·8
Himachal Pradesh	45·5
Kutch	30·5
Manipur	15·5
Tripura	20·7
Vindya Pradesh	63·9
	318·6

AGRICULTURE

Production Targets—The development programme for certain basic agricultural products are shown as follows—

	1950-51	1955-56	*p.c. of increase*
Food grains, (million tons)* ..	52·7	61·6	14†
Cotton (millions of bales) ..	2·97	4·22	42
Jute (do) ..	3·3	5·39	63
Sugarcane (millions of tons) ..	5·6	6·3	12
Oilseeds (millions of tons) ..	5·1	5·5	8

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* excludes data for Punjab, Orissa, Hyderabad, Pepsu and most of the Part C States.

† increase on the production of 54,000,000 tons 1949-50 which was used as the base year for fixing the planned expansion of 7,600,000 tons.

Fisheries—With new and improved methods, it was expected that first production would increase by 50 p.c., from 1,000,000 tons to 1,500,000 tons in 1955-56.

Forests—The total output of timber is expected to increase from 1,800,000 tons to 2,000,000 tons by the end of the Plan or by about 11 per cent.

Community Projects—Community Development was the method and the Rural Extension the agency, through which the Plan sought to initiate a process of transformation of the social and economic life of India's villages. The estimated expenditure on a basic type of rural community project would be Rs. 6,500,000 over a period of three years, of which Rs. 5,847,000 would be rupee expenditure and Rs. 653,000 dollar expenditure. The estimated cost of a composite type of project would be Rs. 11,100,000. The division of expenditure between the Centre and the States would be about 75 p.c. by the Centre and 25 p.c. by the State in respect of non-recurring expenditure and 50 p.c. each for recurring expenditure.

National Extension Organisation—The Grow More Food Inquiry Committee had proposed the establishment of a National Extension Organisation for intensive rural work, and during the five years of the Plan, it was contemplated that about 120,000 villages (about a quarter of the rural population) would be brought within the operation of extension service.

Food Policy—The Commission tressed that a well-defined food policy was an essential condition for the successful implementation of the Plan. If the prices of food grains rise this leads directly to a rise in the cost of living and in production costs all round.

The aim of the food policy during the period of the Plan must be to increase domestic production, to secure an increase in the marketable surplus and to distribute it as equitably as possible, and to eliminate by stages the need to import food grains. However, as the efforts to increase food production would show full results only after some time, the policy must be based on the assumption of a continuance of relative scarcity and strain, specially as the Plan envisaged a high level of investment. Rationing and procurement, together with certain minimum imports, must be regarded during the period of the Plan as the key to maintaining a stable system of food controls.

In view of these factors, the Commission considered that food controls could only be relaxed or modified after the target of 7,500,000 tons of additional production had been achieved and adequate transport facilities had been created to ensure the rapid movement of food grains from one part of the country to another. Responsibility for fixing wholesale and retail prices and for coordinating the control policy of the States must remain with the Centre.

The Commission suggested that in view of the World shortage of rice and the high price which India had to pay for rice imports, a change in the food habits of the Indian people was highly desirable. It would not be difficult to make good this deficiency by substituting wheat or other foods to a moderate extent for rice in the customary diet of the people.

Land Tenure—Whilst it is necessary on the one hand, to achieve the agricultural targets set in the Plan, the land policy should be such as would reduce disparities in wealth and income, eliminate exploitation, provide security for tenants and workers and promise equality of status and opportunity to different sections of the rural population.

Commission made number of important recommendations concerning land ownership, aimed primarily at (*a*) setting of an upper limit to land holdings, (*b*) the provision of facilities to large owners who cultivated their land themselves, (*c*) the enactment of legislation to maintain cultivation at a certain level of efficiency by small and medium owners.

The recommendations in respect of various types of owners are as follows—

Large owners—(1) There should be an absolute limit fixed by the various States to the amount of land which an individual might hold, (2) cultivation and management of land held by any individual owner should conform to standards of efficiency determined by law, each State should enact suitable land management legislation, laying down standards of cultivation and management and imposing specific obligations.

Medium and small owners—The general aim should be to encourage and assist these owners to expand production and organise themselves in cooperatives. For small farmers, every State should have a programme for the consolidation of holdings, and that a minimum holding should be fixed, below which sub-division would not be permitted. The right to resume land for personal cultivation should be given only to those owners who wished to cultivate it either themselves or through members of their families; a period might be prescribed during which an owner might resume ownership for personal cultivation and it he failed to do so within this time, the tenant should have the right to buy the land. Tenants-at-will should ordinarily hold tenancies for 5—10 years, which should be renewable.

In fixing rents the main consideration should be that, having regard to the expenses of cultivation, a fair wage remained for the cultivator. The Commission suggested that over a great part of the country a rate of rent exceeding one-quarter or one-fifth of the produce should require special justification.

Landless Workers—The Commission suggested that the problem of landless workers would have to be approached in terms of institutional changes. In particular, it argued it was necessary to work out a co-operative system of management in which the land and other resources of a village could be managed and developed so as to increase diversity of production and to provide employment for all those able and willing to work.

Village organisation—There was need at the village level for an organisation deriving its authority from the village community and charged with the main responsibility of undertaking programmes of village development. The village *Panchayat* had an important role to play in such problems as the enforcement of tenancy legislation, safeguarding the interests of landless peasants, the provision of maximum holdings, etc. The Commission suggested that *Panchayat* should become the agency for land management and land reform in the village.

Land Reforms Organisation—The Commission recommended the setting up by the Central Government of a Land Reforms Organisation which would be concerned with the revaluation of land reform programmes, investigations in the land problems etc.

IRRIGATION AND POWER PROJECTS

Development Targets—The expansion of irrigation and power output was planned as follows—

	1950-51	1955-56
Major irrigation (millions of acres) ..	50·0*	8·5†
Minor irrigation (do) ..	50·0*	11·2†
Electrical Energy (installed capacity in millions of kw.)	2·3*	3·5†

All new irrigation and power projects under construction or consideration would cost about Rs. 20,000,000,000 and that they would add 40,000,000—45,000,000 acres to the area now under irrigation and create additional power generation capacity of about 7,000,000 kw.

New Multi-purpose Projects—It would not be possible to start any new projects in the first three years of the Plan, but it would be necessary to do so in the latter half of the Plan. The details of the proposed new projects are shown below—

Project	*Area served*	*Cost* (millions of Rs.)	Irrigation (000 acres)	*Power* (kw installed)
Kosi (Stage I) ..	Bihar & Nepal	660	2,620	40,000
Koyna (Stage I) ..	Bombay	330	..	240,000
Krishna ..	Mad. & Hyderabad	—	—	—
Chambal (Stage I)	M. P. & Rajasthan	337·5	1,200	80,000
Kihand ..	U. P.	350	—	240,000

The total cost of these projects would be Rs. 2,000,000,000 of which it might be possible to spend Rs. 400,000,000 during the period of the Plan.

Completion of the Present Projects—First Five Year Plan aimed mainly at the completion of projects already under construction which were estimated to cost, on completion, Rs. 7,650,000,000 upto March 31, 1951, a sum of Rs. 1,530,000,000 had already been spent on them and during the period of the Plan it is proposed to spend a further Rs. 5,580,000,000. The projects were calculated to irrigate an additional area of 8,580,000,000 acres by 1956 and to generate 1,080,000 kw. of additional power but after their full development the total addition to the area irrigated would be 16,700,000 acres, and to power resources 1,400,000 kw. The annual expenditure and the anticipated benefits from all the projects year by year would be as follows—

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* actual production. † planned increase 1955-56.

	1951-52	1952-53	1953-54	1954-55	1955-56	*Ultimate*
Expenditure (millions of Rs.)	850	1,210	1,270	1,070	780	
Addl. irrigation ('000 acres cumulative)	646	1,890	3,555	5,749	8,533	16,942
Addl. power ('000 kw. total increase over 1950-51) ..	58	239	724	875	1,082	1,465

Minor irrigation works were estimated to cost Rs. 470,000,000 and to irrigate an additional area of 11,200,000 acres by 1955-56.

National Irrigation Policy—The Commission tressed that it was necessary to adopt a national irrigation policy because (*a*) facilities did not exist for irrigation in all parts of the country and when they did exist they should be fully developed in the interests of the food requirements of the nation as a whole, (*b*) it was necessary to pool the best talent and resources available in order to tackle the problems connected with the multi-purpose projects, (*c*) development schemes had to be coordinated, as river valleys were not confined to State boundaries, (*d*) the large financial outlay involved in the projects could only be met if assistance were given by the Central Government.

INDUSTRIAL DEVELOPMENT

Industrial Policy—Certain industries such as munitions productions, development of atomic energy, and railways were reserved exclusively to the Central Government, whilst in certain others, such as coal, iron and steel, aircraft manufacture, ship-building, manufacture of telephone, telegraph and wireless apparatus and the production of mineral oils, the Commission thought that the responsibility for further development should be borne by the State Governments, except to the extent the cooperation of private enterprise was felt to be necessary. The rest of the industrial field would be left to private enterprise and cooperative efforts, although Central regulation and Control were envisaged for certain specified industries of special importance from the points of view of the investment and technical skills involved.

Order of Priority—The following order of priority was suggested with regard to the industrial development—(*a*) fuller utilization of existing capacity in producer goods industries such as jute and plywood, and consumer goods industries as cotton textiles, sugar and soap, (*b*) expansion of capacity in capital goods industries such as iron and steel, aluminium, cement, fertilizers, heavy chemicals and machine tools, (*c*) completion of industrial units on which considerable capital expenditure had already been incurred, (*d*) establishment of new plants for industries like the manufacture of sulphur from gypsum, or pulp from rayon, or scrap from non-ferrous metals, so as to increase the supply of key materials vital for industrial development.

Capital Investment—The total investment for financing industrial expansion under the plan was estimated at Rs. 3,270,000,000 of which Rs. 2,330,000,000 was in respect of private sector and Rs. 940,000,000 in respect of public sector. In addition, expenditure on replacement and modernization might amount to a further Rs. 1,500,000,000. After taking account of the investment needed for working capital, as well as certain other items, the overall requirements of finance would probably amount to Rs. 7,070,000,000.

Production Targets—On the basis of above expenditures, the following targets of increased production were planned—

	Production in 1950-51	*Production aimed at in 1955-56*
Iron & Steel—		
Pig iron ..	1·57 million tons	1·95 million tons
Finished steel ..	0·98 " "	1·28 " "
Cement ..	2·69 " "	4·50 " "
Aluminium ..	0·37 " "	1·20 " "
Amonium Sulphate ..	46,500 tons	450,000 tons
Superphosphate ..	58,100 "	184,000 "
Locomotives ..	—	170
Machine tools ..	1,100	4,600
Petrol refining ..		
Liquid Petroleum..	*	403 million galls.
Bitumen ..	*	37,500 tons
Cotton manufactures—		
Yarn ..	1,179 million lbs.	1,640 million lbs.
Millcloth ..	3,718 " yds.	4,700 " yds.
Handloom ..	810 " "	1,700 " "
Jute manufactures ..	892,000 tons	1,200,000 tons
Agri. Machinery ..		
Pumps, power driven	34,300	85,000
Diesel Engines ..	5,500	50,000
Bicycles ..	101,000	530,000
Power Alcohol ..	4·7 million gallons	18 million galls.

Foreign Investments—The Government had already given assurances in respect of non-discrimination, reasonable facilities for transfer of profits and repatriation of foreign capital and fair and equitable compensation in the event of nationalization. It was now desirable that any fresh foreign capital should be channelled into the most important sectors of economy; In future, therefore, foreign investment should generally be permitted only where new lines of production were to be developed; or where special types of experience and technical skill were required or where the volume of domestic production was small in relation to demand and there was no indication of the indigenous industry being able to expand at the required rate. Agreement for joint participation between foreign and Indian concerns should be subject to Government approval.

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* not available.

Village Industries—It was tressed that wherever a large-scale industry compected with a cottege industry, a common production policy should be formulated. This means a measure of control by the Government, specially over the organised side of industry, in which connection the Commission made the following recommendations :—(a) that the reserved field of the handloom industry should be extended. (b) that the production of edible oils should be reserved to village industries, and of non-edible oils to oil mills (c) that the capacity of large-scale processing industries should not be expanded except under certain conditions (d) that rice mills of the 'huller' type should be gradually eliminated and (e) that a small levy should be imposed on mill cloth and mill oil in order to help develop the corresponding village industries. A provision of Rs. 150,000,000 had been made for the improvement of village industries and other small industries.

FOREIGN TRADE

Commercial Policy—This should have the following objectives—(a) to help fulfill the production and consumption targets in the Plan (b) to maintain high level of exports (c) to keep India's foreign payments within her foreign exchange resources (d) to ensure that the composition of both exports and imports fitted in with the fiscal and price policies of the Plan (e) to maintain, as far as practicable, a continuity of policy so that trade relations and domestic plans not constantly disrupted.

Exports—The increase of exports are expected to take place mainly in piece-goods, jute yarn and manufactures, manganese ore, oils, coal and coke, black pepper, tobacco, coir manufactures; and woollen manufactures. In addition, there are a number of newly developing exports which are expected to show significant progress in the Five Year period, such as sewing machines, textile machinery, electric fans, bicycles, storage batteries, small machine tools, soap, chemicals, matches, cement, paper and paper boards.

LABOUR POLICY

Objectives—The Commission believed that labour problems should be approached from the point of view both of the welfare of the working class and of the country's economic stability and progress. The basic needs of the worker for food, clothing and shelter must be satisfied and he should also enjoy improved health services, wider provision for social security, better educational opportunities and increased recreational and cultural facilities. Conditions of work should be such as to safeguard his health and protect him from occupational hazards.

Industrial Relations—The Commission declared that the workers' right to association, organisation and collective bargaining should be accepted as fundamental and that trade unions should therefore be welcomed as a part of the industrial system. In order to avoid disputes the duties of employers and the workers should be laid down in specific terms. Resort to direct action by either side should be punishable by law.

Wages—Both wages end profits having risen considerably in recent years, would need to be controlled to some extent during the period of the Plan in order to check inflation. Full and effective implimentation of the minimum wage legislation should be secured, while general policy should be to reduce disparities of income and to accelarate and extend to standardization of wages.

TRANSPORT AND COMMUNICATION

Railways—Annual expenditure would be Rs. 800,000,000 (a total of Rs. 4,000,000,000 over five years), representing about 80 per cent of the total outlay for transport and communications; of this amount, the contribution from Central Reserves would be Rs. 800,000,000, the balance of Rs. 3,200,000,000 being raised by the railways themselves. In addition a substantial part of the Rs. 500,000,000 alloted for basic industries and transport was for the railways.

Shipping and Ports—The development programme for shipping would increase the total gross registered tonnage of coastal and sea-going vessels to about 600.000 tons by 1955-56. The Commission recommended that Rs. 150,000.000 should be provided as a Central loan to shipping companies for the purchase of ships and expressed hope that additional sums for this purpose might be forthcoming from the International Bank.

As regards ports, Commission observed that present five major ports were not sufficient to meet demands. It was also necessary to develop the ports in order to provide a natural outlet for the traffic previously handled by Karachi; and also to provide port facilities for the new petroleum refineries to be built in Bombay. For the projected new port of Kandala which would take up the traffic formerly handled by Karachi, the cost during the plan was estimated at Rs. 120,500,000 while Rs. 80,000,000 for port facilities of oil refineries. As for five major ports, Government would advance Rs. 120,000,000 to them during the period of loan and this sum should be supplemented by Rs. 155,000,000 from the resources of the Port authorities themselves.

Highways—The Commission recommended the construction of 450 miles of new roads, 43 large bridges and a large number of small bridges as well as improvement of about 2,200 miles of roads. The Central Government planned to spend Rs. 270,000,000 over five years for the development of national highways, a further Rs. 40,000,000 for the development of other selected roads and Rs. 2,115,000 on Central Road Research Institute. Expenditure by the States was estimated at Rs. 735,400,000.

Civil Aviation—The Commission stated it had been found that existing air transport companies could not work on an economic basis, and suggested that they should therefore merge into a single unit. The Plan provided Rs. 95,000,000 for compensation to the existing companies and for the purchase of new aircraft.

Communications—A sum of Rs. 500,000,000 were recommended for the development of postal services, telegraphs and telephones, the main emphasis being on the provision of a post office for every village with a population of 2,000 or over and on the extension of telephone facilities in the larger cities.

SOCIAL WELFARE

Education—The allocation for education, Rs. 1,556,600,000 represented 46 per cent of the total provision made for social services and 7 per cent of the total expenditure of the plan. Rs. 390,200,000 of the allocation related to the Central Government and Rs. 1,159,800,000 to the States' programmes.

Public Health—The Five Year Plan would have the following priorities: (*a*) water supplies and sanitation (*b*) control of malaria (*c*) preventive health care for the rural population through both permanent and mobile health units (*d*) health services for mothers and children (*e*) health education and training (*f*) self-sufficiency in drugs and equipment (*g*) family planning and population control.

The total expenditure on health under the Plan was estimated at Rs. 995,500,000, of which the Centre's share would be about Rs. 178,700,000.

Housing—Of the total provision of Rs. 486,900,000 for housing, the expenditure by Central Government would amount to Rs. 385,000,000 and by States to Rs. 101,900,000. First priority would be for houses in industrial areas. For such questions as housing policy, housing standards and estimates of cost, slum clearance, town and country planning, rural housing etc. Central and Regional Housing Boards should be set up for implimenting housing programmes.

Rehabilitation of Refugees—The present rehabilitation Plan was expected to cost Rs. 850,000,000 over three years of 1951-54.

Welfare Schemes—The Commission tressed the need of organising family welfare services and in regard to youth welfare, proposed that promotion of a well-co-ordinated and powerful youth movement functioning through a national council. It recommended legislation at the Central level to combat the trafficking in women and children and to abolish prostitution. A sum of Rs. 40,000,000 was provided for strengthening, improving and extending the nature and scope for voluntary welfare activities.

Backward Classes—A total sum of Rs. 370,000,000 was provided for the all-round advancements of backward communities.

MINERAL RESOURCES

National Survey—The plan provided for the systematic and detailed investigation and survey of the country's reserves of important minerals and laid down the principles for undertaking such investigations. It also made some specific recommendations for the development of such India's major minerals.

ADMINISTRATION OF THE PLAN

Elimination of Corruption—The Commission emphasized the need of waging war against curruption and made following recommendations—(1) existing legislation relating to curruption should be extended to cases in which the near relatives of a public servant were found to have become suddenly rich (2) public servants should be required to furnish an annual returns of their moveable and immovable assets acquired by them and by their relatives (3) officials who did not enjoy reputation of honesty should not be placed in position which have considerable scope of discretion (4) Central Government's Special Police Establishment should be equipped to investigate not only offences at the Centre, but also important cases of the States.

Central Board of Public undertaking—It was necessary to establish a Central Board in addition to separate boards of directors for individual public industrial undertakings for successful future development. This Board would advise the Government on question of general importance for the public sector of industry as a whole.

PROGRESS OF THE FIVE YEAR PLAN

A review of the Five Year Plan during the first three years of its operation brings out the following main achievements—(*a*) control of price situation (2) Increase in production, both agricultural and industrial and (3) establishment of a stable economy.

HIGHLIGHTS OF PROGRESS—The highlights of progress since the beginning of the Plan period are indicated below. (Except when specifically mentioned the figures relate to the period of the first two years of the Plan (i.e. 1951-52 and 1952-53). In considering the progress indicated below it is important to bear in mind that they are highlights and do not by any means indicate all the progress in all spheres that have so far been made):

Production of foodgrains in 1952-53 increased by 4.4 million tons as compared to that of the basic year 1950-51.

National Extension Service: One villager out of every eight is receiving attention either under community programme or National Extension Service. Over 47,000 villages with a rural population exceeding 37 million have been covered so far.

Minor Irrigation Works: Irrigation water was provided to about 2.5 million acres of land up to the end of 1952.

Land reclamation: 5,000,000 acres of kans-infested land reclaimed during the first half of the Plan period.

IRRIGATION AND POWER—New land brought under irrigation by the river valley projects was about 1.5 million acres (up to 1952-53).

Additional power generated was 425,000 kw. Also several phases of the multi-purpose projects on hand were completed and preliminary work in connection with a few new projects, e.g. Kosi, was taken up.

INDUSTRY—Cotton Textiles: Cotton yearn production increased to 1450 million lbs. in 1952-53 from 1179 million lbs. in 1950-51. As regards cotton cloth (mill made), the target for the Plan period namely. 4700 million yards, was nearly reached.

Iron and Steel: Agreement was concluded with Messrs. Krupp and Demag for financial and technical collaboration in connection with the new Government-owned steel plant. The expansion schemes of Tata Iron and Steel Company, the Indian Iron and Steel Company and the Mysore Iron and Steel Company progressed. The Indian Iron and Steel Company was helped by the Government of India to obtain a loan of 31.5 million dollars from the World Bank for its expansion programme.

Cement: Production increased to 3½ million tons in 1952-53 from 2.69 million tons in 1950-51.

Fertilisers: With the completion of the Sindri Fertiliser Factory, the production of sulphate of ammonia increased to 252,000 tons in 1952-53 as compared to 46,304 tons of indigenous production in 1951.

Locomotives: The Chittaranjan Locomotive Works started production during the period. The total number of locomotives so far built comes to 100.

Petroleum refineries: Work has commenced in the two petroleum refineries which are to be set up at Trombay island by Burmah-Shell and the Standard Vacuum Oil Co., of New York. An agreement has been finalised with the Caltex Company regarding a third oil refinery which is to be located at Visakhapatnam.

Telephones: The Indian Telephone Manufacturing Factory went into production in 1953, its annual output being 40,000 telephones.

PUBLIC SECTOR—Schemes in public sector: The following important projects in the public sector are expected to go into production in 1954: The Machine Tools Factory, Jalahalli, Indian Rare Earths Ltd., Travancore, U.P. Government Cement Factory, Nepa Mills Ltd., Madhya Pradesh, Penicillin Factory, D.D.T. Factory, Hindustan Cables Ltd. and The Bihar Government's superphosphate factory.

Coaches and Wagons: 1751 coaches were built during the first half of the Plan period. The number of wagons built was 12,770.

Road construction: For the National Highways 240 miles of roads were completed within the first two years and work on 450 miles was on hand. 17 new bridges were completed and work on 20 more was on hand. Nearly 7,200 miles of State roads were constructed or improved.

SHIPPING—Shipping: Coastal shipping tonnage increased by 77,000 G.R.T. The share of Indian ships in the coastal trade which was 80% in 1950-51 reached 100% in 1952-53. At the Hindustan Shipyard Ltd., Vishakhapatnam, six ships each of 8,000 d.w.t. were constructed during the first two years of the Plan.

HEALTH: Under the malaria control programme, protection given in 1953 is about 50 per cent more than that of the previous year. Under the B.C.G. vaccination programme, 24 million people have been tested and 7½ million vaccinated.

EDUCATION—Education: A new scheme for opening a large number of single-teacher schools and social education centres has been started. The total employment potential is 80,000.

SOCIAL WELFARE: In addition to progress on social welfare schemes in the Five-Year Plan, a Central Social Welfare Board has been set up to provide assistance to voluntary institutions for expanding their welfare activities. The Board has so far provided assistance of the order of nearly Rs. 16 lakhs to about 480 institutions.

PEOPLE'S PARTICIPATIONS:—People's participation in those aspects of work in which such participation can be useful has been active and enthusiastic. In the Community Projects as well as in the Local Works Programme, there is welcome evidence of such participation. Nearly 12,000 local works costing over Rs. 3 crores have been launched with people's initative.

EMPLOYMENT—Employment: Complete data regarding employment figures are not available, but new employment has been provided in the multi-purpose river valley projects, industries in the public and private sector, in the Community Projects and in the National Extension Service and in new schemes launched last year. Nonetheless, the employment situation in 1953 was far from satisfactory, a most important contributory factor to this state of affairs being the appearance of a 'slack' in the economy consequent on the receding of Korean war boom conditions. Recently, the Plan has been expaned and the investment programme, both in the public and private sectors, is proposed to be stepped up. A number of new schemes with large employment potential is expected to be launched. It is hoped that the cumulative effect of all these steps will be favourable on the employment situation.

PROGRESS OF THE DEVELOPMENT PLANS

Sindri Fertilizer Factory—The Sindri plant was completed in October 1951 and is capable of producing 350,000 tons of ammomium sulphate a year. Another project at present under consideration is the expansion of the Sindri factory for the production of urea and ammonium nitrate. To make the Sindri factory independent of supplies, an order for a coke oven plant was placed with Carl Still of Germany. The cost of establishing this coke oven plant which is expected to go into production in 1954 is estimated to be Rs. 2·35 crores. The first preliminary steps for the further expansion of Sindri so as to produce alteranative nitrogenous fertilisers based on the by-product gases of the coke oven were taken early in 1953 with the aid of the TCA. The report of the team of experts sent to visit the fertiliser plants in

Japan, U.S.A. and Europe will be available soon and will enable the Sindri Fertiliser Factory to process the expansion scheme further.

The Chittaranjan Locomotive Factory, the total cost of which on completion will approximate to Rs. 15.0 crores (cost within the Plan period Rs 4.73), has already commenced manufacturing some of the necessary components and it is expected that by 1957 the factory will be able to produce 120 locomotives a year without having to depend on imported components. It has produced in all 100 broad gauge locomotives and 44 metre gauge locomotives since it went into production during the last three years.

Railway Coach Factory—In the Railway coach factory, the investment during the plan period will be Rs. 4 crores. The project is expected to be completed by 1955, and the capacity in 1955-56 will be 50 units per year.

Machine Tools Factory—Work on the construction of the Machine Tools Factory at Jalahalli in Mysore State has already commenced. The factory is estimated to cost of Rs. 9·78 crores, and by 1955-56 it will produce 1600 machine tools of the value of over Rs. 4 crores a year. This factory will specialise in the production of high precision machine tools and will thus provide the basis for the subsequent expansion of heavy as well as light engineering industries.

Hindustan Shipyard Ltd: The provision of over Rs. 14 crores for ship-building includes the expenditure for the acquisition of the Visakhapatnam yard and its development, besides subsidy for construction of ships and loans to be given to the shipping companies for purchase of ships built in the Yard. The Plan provides for the manufacture of engines and boilers in the workshop at the Yard and also for expansion of berths for the building of ships so as to enable the Hindustan Shipyard Limited to bring down the cost of ships constructed to the level of those built in the UK. The operation of the Yard will enable coastal shipping in India to meet the bulk of its replacement requirements. There has been already an investmnet by the State of Rs. 1·50 crores on the project. Including an investment of Rs. 14 crores contemplated during the planning period, the total Government investment on the project will amount to Rs. 15·50 crores. The project is expected to be completed in 1956-57; the capacity in 1955-56 will be 50,000 dwt.

The Hindustan Shipyard Ltd., completed construction of 3 ships during 1952, bringing the total number of ships so far built in the yard to 10. The yard is now building two vessels of similar tonnage and design. The shipyard has, in hand, orders for five 7,000 tonners and two 8,000 tonners of Maierform design with diesel engines.

The commissioning of the third berth at the Visakhapatnam shipyard, construction of which has been completed, will to some extent increase the capacity of the yard.

National Instruments Factory: The total capital investment will amount to Rs. 1·86 crores. Production amounted to Rs. 20 Lakhs during 1952-53. Production has already started. The factory is expected to have by 1955-56 capacity for the production of instruments for the additional value of Rs. 64 lakhs per year.

Indian Telephone Industries: Initial capital outlay amounted to Rs. 1·20 crores. During the plan period, there will be a further investment of Rs. 1·30 crores, bringing the total investment to Rs. 2·50 crores. Assembly has already started. The production capacity of the factory in 1955-56 will be Rs. 2 crores worth of telephones and other articles per year.

Hindusthan Cables Ltd: The outlay will amount to Rs. 1·30 crores. The project is expected to be completed in 1953-54. Its capacity at the end of the plan period will be Rs. 1 crore worth of cables per year.

The Penicillin Factory: Including a sum of Rs. 57 lakhs from WHO and UNICEF, the aggregate investment on the project will amount to Rs. 2·11 crores. The project is expected to be completed by 1954 and the capacity by 1955-56 will be 4·8 million mega units.

DDT Factory: This is again a project which has been started with the co-operation of WHO and UNCIEF, which have contributed $350·000 out of a total investment of Rs. 39 lakhs.

Salt Works: The project will be of two kinds, viz., (a) development of existing works and (b) development of the Mandi Salt Works. The total outlay on the former will be Rs. 54 lakhs and on the latter Rs. 100 lakhs. The former will be completed by 1955-56 and the latter by 1953-54. By 1955-56, the additional capacity of the existing works will be 368,000 tons of salt and of the Mandi Works 61,000 tons per year.

Rare Earths Factory: The project was completed in June, 1952, the capital outlay being Rs. 80 lakhs. The capacity at the end of the Plan period will be 800 tons of rare earth and 203 tons of thorium compounds in terms of thorium nitrate.

Housing Factory: The aggregate investment on the project will amount to Rs. 106 lakhs.

Other Projects: These include the Nasik Printing Press, the Silver Refinery and the New Mint at Alipore. The total investment on these during the Plan period will amount to Rs. 2·02 crores and they will be completed by 1955-56.

Progress of the River Valley Projects: The Five Year Plan has given the highest priority to irrigation and power providing as much as Rs. 670 crores or nearly one-third of the total investment of Rs. 2069 crores visualised in the Plan. This is made up of Rs. 430 crores for major irrigation and multipurpose projects, including Rs. 40 crores for the five new projects, namely, Chambal, Kosi, Koyna, Rihand and a project on the Krishna River; another Rs. 128 crores for power projects; and Rs. 112 crores for minor irrigation works which occupy an important place in the development of irrigation.

In the Plan are thus included 140 irrigation and multi-purpose projects; of these 8 have already been completed and another 92 are under construction. Fifty-five of them will be completed within the period of the Plan. Nine of these projects will each bring more than a lakh of acres under irrigation when completed.

Up to March 1953 an additional area of 1·42 million acres has already been brought under irrigation from major works. As a result of minor irrigation schemes another 4 million acres are expected to have come under irrigation. This makes a total of newly irrigated area of about 5·5 million acres as against the target of about 20 million acres for the period of the Plan. When all the major projects in hand are completed, another 8 million acres will be added to the irrigated area.

The 5·5 million acres already brought under irrigation have added to the agricultural production potential by over a million tons in terms of food grains. By 1955-56 we shall have an increased production of about 4 million tons by irrigation alone.

Of the 96 power projects included in the Plan, 85 are in progress, 13 have been completed and another 13 are expected to be completed by 1955-56. An additional capacity installed during the period 1951-53 is 3,15,000 kw. as against the target of 10,82,000 kw. included in the Plan.

All round progress in the execution of projects at Hirakud, Kakrapar, Bhakra-Nangal and Damodar Valley is recorded in the Annual Report of the Ministry of Irrigation and Power for 1952-53. According to the report, the earthen parts of the Hirakud dam are under construction, and concreting of the foundation of the 3,800-foot concrete portion has begun. Some sections of the earthen dykes have been completed and the canal system is well under way. During 1953-54, in addition to work continuing on the dam, the dykes and the canal systems, it is proposed to take up the power house, sub-station, transmission lines and other appurtenant works.

At Kakrapar, the 2000-foot long stone masonry weir on the Tapti river has been completed. The regulators on the left bank canal and several cross drainage works are expected to be completed in 1953-54. Substantial progress has been made on excavation of canals. The Kakrapar weir was opened on 29 June, 1953. Located at the exit of the river Tapti from the hilly and forest tracts of the basin, 50 miles upstream of Surat, the Kakrapar weir will command the greater part of the cultivable area of the district.

The Nangal dam—part of the Bhakra-Nangal scheme—has been completed except for the installation of gates and gearing, which will be fitted during 1953-54. The diversion tunnels at the Bhakra dam site will also be shortly ready. Partial irrigation, however, has already started. The construction of the first power house on the hydel channel is in an advanced stage.

The Damodar Valley Corporation now in its fifth year of construction programme has so far spent about Rs. 45 crores out of the revised estimates of Rs. 83·8 crores for the first phase of the development. The Tilaiya Project is in final stages and the opening ceremony of the dam was performed by the Prime Minister on February 21, 1953. About 5,000 acres were irrigated from the reservoir here during 1953. Two generating sets of 2,000 KW each are being installed. About 55 per cent of the earth dam and 63 per cent of the concrete dam at Konar has been completed. At Maithon, the right embankment has been built. The river has been diverted through a tunnel, and work on the main earth dam is proceeding. In the Panchet Hill area good progress has been made on the diversion channel.

The first unit of 50,000 Kw. at the Bokaro thermal power station began to operate on February 21, 1953. Two more units have been installed in June 1953. The transmission system to distribute the power produced at Bokaro has also been completed.

The Ministry of Irrigation and Power completed investigations of the Sabarmati, Ganga Barrage, Narmada Valley (the Tawa, Punasa and Baroda dams), and Herangi (Coorg) projects. It is now examining the reports and drawing up designs and estimates. Nearing completion are investigations regarding the Belka dam on the Kosi. During 1953 it is proposed to finish studies regarding the Jonk and upper Mahanadi projects and the Mahanadi Delta. Hydrological data is being collected for the Tikarpara and Naraj dams and the Assam projects. Among the new projects to be studied in 1953-54 will be the Krishna, Godavari and Pennar.

The Tungabhadra dam, one of the major river valley projects in the South, was opened in July, 1953. Simultaneously on that day water was let out through the two main canals of the project, one on the Madras and the other on the Hyderabad side. With the creation of the Andhra State, the Tungabhadra Board, has been appointed by the President to take charge of the works connected with the Tungabhadra project. The Board consists of a chairman and six members.

Surveys regarding the Koyna and Rihand projects, two out of the five new projects included in the first Five Year Plan for taking up during the latter part of the Plan period have been completed. Detailed investigations in regard to the remaining three projects, namely, Krishna, Chambal (Stage I) and Kosi (Stage I) were nearing completion.

COMMUNITY DEVELOPMENT PROJECTS

Objectives: The basic aim of the community development projects is to increase agricultural output by every possible means; to tackle the problem of unemployment in the rural areas, to improve village communications, to foster primary education, public health and recreation in the village, and to improve housing and to promote indigenous handicrafts and small scale industries. The success of the community project will depend on the ability of the villagers to improve their lot through voluntary effort.

Organisation: The execution of the programme in each State will be the responsibility of the State Development Committee presided over by the Chief Minister. Each State will have a Development Commissioner and at the Centre there will be an executive officer called the Administrator. The District Development Officer, who has the status of an Additional Collector, will be specially responsible for the execution of the projects. In addition there will be a District Development Committee prescribed over by the Collector. While the Project Executive Officer will formulate the programmes and be generally responsible for work in his area, the most important link in the chain is the village-level worker who will be primarily responsible for ensuring the participation of the villagers in the projects.

The Community Development Project was drawn up by the Planning Commission as an integral part of the Five Year Plan. The Planning Commission has accordingly provided a sum of Rs. 90 crores in the Plan for setting up a number of community projects and further envisages the establishment of a net work of extension workers throughout the country in the course of ten years.

The development programme falls into two separate but closely inter-related parts, firstly, a programme supervised by a Community Projects Administration, with financial assistance provided from the Indo-American Technical Co-operation Fund, will carry out three main types of projects: (1) basic community development projects, (2) composite development projects, and (3) 'training centres' for instructing village workers. In the 'basic' community development projects, primary emphasis will be laid on increasing agricultural production, together with work, in other spheres such as public health, education and road construction. In general, each project area, will cover about 300 villages (sub-divided into three "development blocks" of 100 villages each), a population of 200,000, a geographical area of 500 sq. miles and a cultivated area of 150,000 acres. In the "composite" development projects, emphasis will be laid on the development of small industries, as well as of agricultural production. The "training centres" whose cost will be covered by finance made available by the U. S. Ford Foundation will be located in or near the community development areas, so as to facilitate the training of village workers. The second part of the overall Community Development Programme, also sponsored by the Ford Foundation will consist of projects directly supervised by the Ministry of Food and Agriculture. The Projects however, will cover a smaller area and consist of about 100 villages each.

The area selected for the first 55 projects were situated in Assam, Bihar, M. P., Madras, Orissa, Punjab, Uttar Pradesh, West Bengal, Hyderabad, Madhya Bharat, Mysore, Pepsu, Rajasthan, Saurashtra, Travancore-Cochin, Ajmer, Bilaspur, Bhopal Coorg, Delhi, Himachal Pradesh, Kutch, Manipur, Tripura and Vindya Pradesh as well as in Kashmir.

Some of these projects will be supervised by the Community Projects Administration with financial and technical aid from the Indo-American Technical Co-operation Fund, and other by the Ministry of Food and Agriculture with financial assistance from Ford Foundation. The total cost of the scheme will be over 380,000,000 rupees to which U. S. Government will contribute 40,000,000 rupees ($8,671,000) in the form of technical aid and equipment.

Prior to the inauguration of the Community Development Programme, five operational agreements between India and United States had been signed in New Delhi on May 31, 1952 within the framework of the Indo-American Technical Co-operation Agreement and also a sixth agreement on June 14, 1952.

In addition to the six agreements as above, two other Indo-U. S. Agreements had been concluded at an earlier date for strengthening the Indian Malaria Control Organisation and for forest research and desert control.

The conclusion of these agreements complete the allocation of $50,000,000 which U. S. Government undertook to contribute to the Indo-American Technical Co-operation Fund set up under the Technical Co-operation Agreement of Jan 5, 1952.

A supplemental technical co-operation agreement providing for a further U. S. contribution of $38,350,000 (about 183,300,000 rupees) for economic development of India during financial year 1952-53 was signed in New Delhi on November 3, 1952.

PROGRESS OF COMMUNITY PROJECTS

The progress report of the Community Project work during the first nine months of its operation (October 1952—June 1953) indicates that the people's contribution for the programme has been almost as much as the total Government expenditure on the projects. In 81 development blocks on which work started on October 2, 1952, the Government expenditure during the period under review has been Rs. 116·79 lakhs; as against this, the total people's contribution has been Rs. 108·62 lakhs composed of about Rs. 48·36 lakhs as the value of contribution made in the form of labour and Rs. 60·26 lakhs in cash and other forms of contribution, for example, land.

The details available also indicate that the progress in terms of physical achievement has been considerably more during the last these months of the period than at the initial period of six months. The following table would show the tempo of activities:

Items of work.	For nine months (Oct. 52—June 53).
Compost pits dug	80,091
Fertilisers distributed	2,89,890 mds. plus 60,833 bags.
Demonstration farms started	934
Area brought under fruits	6,478 acres.
Area brought under vegetables	6,337 acres.
Waste land reclaimed	35,437 acres.
Additional area brought under irrigation	68,986 acres.
Breeding and artificial insemination centres started	141 and 4 key village centres.
Cattle inoculated and vaccinated	6,28,971
Soakage pits constructed	13,698
Drains constructed	58,146 yards.
Wells constructed	764
Wells renovated	988
Schools converted into basic type	209
New schools started	1,086

Adults under training	30,285
Pucca roads constructed	98-5/8 miles.
Kachcha roads constructed	2,133-5/6 miles and 3 bridges.
Additional employment in arts and crafts..	811
Number of village level workers and other supervisory personnel trained ..	1,733
Village houses constructed	985

The statement indicates that while agriculture and allied subject like animal husbandry, horticulture, etc., received their due share of attention, the other aspects of community programme, namely, improvement of health and sanitation, increase of literacy, construction of roads and improvement of communications, arts and crafts also received attention.

Social and cultural activities include the starting of new schools and adult education centres, greater attention to health and sanitation and the prevention of disease through large-scale vaccination and inoculation of people. Extensive veterinary services were provided to protect cattle against disease.

Existing cottage industries were improved through the provision of loans and training in improved technique. New co-operative societies were organised and credit societies converted into multipurpose societies in a number of places.

People have taken up the community programme with enthusiasm; voluntary contribution of money, material and labour in the construction of roads, canals, tanks and other irrigation works and in building schools, panchayat ghars and health centres have increased.

Some of the more important items of work done in individual States are given below:

WEST BENGAL: In West Bengal, 65½ miles of kacha feeder roads have been built by the villagers on their own and offers have been made of cash and labour for constructing tube-wells and rign-wells in all the blocks. New school buildings have been constructed by the people and donations are being received for more.

ASSAM: In the Golaghat Mikir Hills Development Block, 71 miles of new village roads have been built by voluntary labour. Up to the end of July 1953, 159 miles of 12 feet wide village roads have been constructed in the first block of the Darrang project by the people themselves without any financial assistance from the Government.

BIHAR: In the Ekangarsarai-Barbigha project area, 116 night schools have been started for adults. In many places, the villagers have themselves constructed the school buildings and public libraries. Twenty miles of kacha roads have been laid down. Valued in terms of money, the contribution of the villagers towards the various works in the project area is about Rs. 36,000.

In the Pusa-Samastipur Begusarai project, villagers have constructed or repaired 175 miles of kacha roads and 13 culverts. Their contribution was not only in voluntary labour but also in lands.

BOMBAY: In the Kolhapur project, about 1,00,000 persons worked on the village roads. Voluntary labour contributed by them is estimated at about Rs. 1,15,000. Besides, the villagers have given lands for these roads free of cost, the value of which is estimated at Rs. 17,700. So far 36 miles of kacha roads have been constructed. A special feature in project activity is the construction of weir-cum-bridges across rivers, each costing between Rs. 1½ lakhs to Rs. 2 lakhs. Two works which were started before the project came into existence have now been completed.

In the Mehsana project, three villages are constructing high schools without outside aid at a total cost of Rs. 1½ lakhs. At Vijapur, a sum of Rs. 42,000 representing the entire cost of additions to the local hospital has been constributed by the people. The people of Pothapur have raised a sum of Rs. 25,000 for the construction of maternity home. Cash offers for the construction of primary schools, water supply and drainage works, some to lakhs of rupees.

MADHYA PRADESH: Village development Councils known as Vikash Mandals have been formed in every village in Block 1, in most villages in Block II and 50 p.c. of the villages in Block III, in the Amravati-Morsi-Daryapur project. Every Vikash Mandal has undertaken the responsibility of stocking ammonium sulphate. Villagers agreed to maintain ten bulls of Haryana variety free of cost; a sum of Rs. 48,000 has been contributed towards the improvement and construction of a hospital, school buildings and community works.

Twenty seven miles of kacha roads were constructed in the Bastar project. Seven model pacca residential houses, five pacca school buildings and 18 pacca panchayat ghars, in addition to 29 kacha hutments and 11 kacha school buildings were also constructed.

In the Hosangabad-Sohagpur project, 353 new pacca wells were dug and 107 old wells were repaired, thus bringing an additional 1,380 acres under irrigation.

MADRAS: In the East Godavari project, to harness the perennial flow of drainage water in the river Tulyabhaga which passes through the Ramchandrapuram and Kakinada taluks, the ryots of a group of villages have formed a lift irrigation cooperative society at Rayavaram with a share capital of Rs. 35,000. This society has done good work by installing pumps which are electrically worked and will impound water sufficient to cover an area of 1,000 acres on which a second crop paddy will be grown. The water in the Tulyabhaga river is proposed to be similarly utilised at its lower reaches for irrigation purposes. Ninety-five filter point tube-wells have been sunk in the area by the villagers.

In the Malampuzha project, 20 miles of kacha roads have been constructed. On one of these roads in the village Koduvayur, a bridge at an estimated cost of Rs. 10,000 is being constructed.

ORISSA: In the Bhadrak project area, villagers have built 15½ miles of kacha roads at their own expense. In the Russelkanda project area, several hundred acres which used to lie fallow after the main kharif crops, now grow a second crop of vegetables.

PUNJAB: 100 and 63 miles of kacha roads and six miles of pacca roads were completed in the projected areas. Sixty-eight thousand feet of drains have been constructed and over 2·5 lakh square-feet of streets paved.

UTTAR PRADESH: In the Deoria project, 51 tanks were dug and deepened during the shramdan drive of May, 1953 and later. The total earthwork done entirely on a voluntary basis was valued at Rs. 14,280. Sixty miles of village roads were constructed in the Garur project in Almora. A four mile long motor road was constructed by village volunteers. Three miles of irrigation channels were dug 18 miles of old guls were repaired during the shramdan campaign. About 20,000 people offered voluntary labour.

In the Faizabad community development block, 41 tube-wells have been constructed providing increased irrigation facilities for 15,000 acres. Irrigation from tanks has also been introduced by deepening and extending 29 silted tanks. Forty one miles of new guls have been constructed and four miles of guls have been cleaned. Voluntary labour was mobilised in constructing four primary schools, 4 panchayat ghars, 80 miles of kacha road, 21 culverts, 28 residential houses and two irrigation dams.

COMMUNITY PROJECTS PROGRAMME IN 1953-54:

Forty-eight more development blocks consisting of about 4,800 villages will be taken under the community development programme during the year 1953-54. Shortly, 7 more blocks will be selected completing the total 55 development blocks for which a supplementary agreement was signed early in 1953 with the United States of America under the Indo-US Technical Co-operative Agreement.

These blocks will be in addition to the 81 blocks in 55 community project areas in which work was started on October 2, 1952. When the community development programme was first launched it was decided that every year new blocks will be taken up as more trained personnel and resources became available. The present decision to add 48 new development blocks is the second instalment in the process of spreading community development programme in different parts of the country. This is also linked up with the inauguration in October, 1953, the comprehensive National-Extension Service-cum-Community Development Programme under which during the Plan period 1,20,000 villages covering nearly ¼th of the rural population of India will be covered partly under extension service and partly under intensive development programme and 500 under extension scheme during the Plan period.

The blocks have been selected in most of the States of India in consultation with State Governments and their allocation is as below:—

Assam 3, Bihar 1, Bombay 6, Madhya Pradesh 4, Madras 6, Orissa 2, Punjab 4, Uttar Pradesh 7, West Bengal 2 (composite type), Hyderabad 2, Madhya Bharat 1, PEPSU 1, Rajasthan 2, Saurashtra 1, Travancore-Cochin 1, Bhopal 1, Coorg 1, Vindya Pradesh 2 and Bilaspur 1.

Location of the Blocks in the States are given below:—

1. Assam (3 Development Blocks)
    1. North Lakshmipore Block consisting of 8 Mouzas of Ranganadi circle of the Lakshmipore District.
    2. Nowgong Block consisting of seven Mouzas of the Nowgong District.
    3. Lushai Hills, District Lushai Hills.
2. Bihar (1 Development Block)
    Shikarpur Development Block, District Champaran.
3. Bombay (6 Development Block)
    1. Bardoli, Surat District.
    2. Kalol, Panchmahals District.
    3. Mandangad and some villages in Depoli Taluk in Ratnagiri District.
    4. Baglan in Nasik district.
    5. Shahada in West Khandesh.
    6. Indi in Bijapur district.
4. Punjab (4 Development Blocks)
    1. Taran Taran in Jullundhur Division.
    2. Kulu " " "
    3. Thanesar in Ambala division
    4. Naraingarh " "
5. **Uttar Pradesh** (7 Development Blocks)
    1. Bah in Agra district.
    2. Bataganj-cum Jalalabad, Basin of the river Sot in district Badaun and Shahjahanpur respectively.
    3. Deoband, district Saharanpur.
    4. Demoriaganj, district Basti.
    5. Dudhi, district Mirzapur.
    6. Jaunsar Bawar-cum-Jaunpur Rawain, Basin of the river Jamuna in districts Dehra Dun and Tehri (Garhwal) respectively.
    7. Details awaited.
6. **West Bengal** (2 Development Blocks)
    1. Alipore Collectorate development block, district 24-Parganas.
    2. Sadar and Vishnupur sub-division—district Bankura.
7. **Madhya Bharat** (1 Development Block)
    Talen development block, Harsingarh-Sarangpur, Tehsils, district Rajgarh.
8. **Pepsu** (1 Development Block)
    Bhatinda Development Block in district Bhatinda.
9. **Rajasthan** (2 Development Blocks)
    1. Nagar Pahari Govindgarh (District Bharatpur, Alwar and Jaipur Division).
    2. Maulasar in Nagoro district, Jodhpur sub-division.
10. **Saurashtra** (1 Development Block)
    Limbdi Development Block, District Zalawad.
11. **Travancore-Cochin** (1 Development Block)
    Ambalapuzha, Prakkad, Thakazhi, Nedumudi, Champakulam and Kainakari consisting of the Pakuthies of Alleppey

(excluding the Municipal area). Revenue district of Quilon.

As regards others States, namely, Madhya Pradesh, Madras, Orissa, Hyderabad, Bhopal, Coorg, Vindya Pradesh and Bilaspur, selection of sites will be finalised after proposals are received from the State Governments concerned.

NATIONAL EXTENSION SERVICE

The Planning Commission has approved the allotment of 200 development blocks under the National Extension Service for the year 1953-54. Of these, 170 blocks have been specifically allotted to individual States and the remaining would be allotted to West Bengal, Madras, Delhi and Tripura from which proposals are yet awaited. These blocks involve about 20,000 villages and a population of about 1,32,00,000. Work on these blocks has commenced from October 2, 1953, that is, just a year after the date when the community projects were inaugurated all over India.

The allotment of these 200 blocks symbolises the beginning of the National Extension Service, which aims to cover, during the rest of the Five Year Plan period, nearly one-fourth of the total rural population of India.

With the allotment of the 200 new blocks under the Extension programme the State Governments proceeded immediately, with the preliminary work, like, survey, organisation, etc., so that the actual operations could be started in all spheres on October 2, when the programme officially began.

The Statewise allotment of the blocks is based on the proposals received from the State Governments. The breakdown of the 170 blocks, specifically allotted to 19 States, is as follows:

Assam	12	Saurashtra	3
Bihar	14	Travancore-Cochin	3
Bombay	20	Ajmer	1
Madhya Pradesh	30	Bhopal	2
Punjab	7	Bilaspur	1
Uttar Pradesh	36	Coorg	1
Hyderabad	11	Himachal Pradesh	4
Mysore	7	Kutch	1
PEPSU	4	Vindhya Pradesh	3
Rajasthan	10		

Of the remaining States, allotment to Madras, West Bengal, Delhi and Tripura is yet to be made. Orissa, Madhya Bharat and Manipur do not propose to take up any National Extension Service blocks during this year owing to the paucity of trained personnel.

The total estimated expenditure involved on these 200 blocks for the three year period would be about Rs. 15 crores, the estimated expenditure on each block being about Rs. 7½ lakhs.

In their report on the First Five Year Plan, the Planning Commission observed that Community development is the method and rural extension the agency through which the Plan seeks to initiate a process of transformation of the social and economic life of the villages. Accordingly, a programme has been drawn up for covering 120,000 villages within the operation of the extension service, that is, nearly one-forth of the rural population. The National Extension Service Development Block will have a small works programme forming a nucleus of productive activities in respect of basic amenities. The pace at which the Extension Service blocks will be taken up for intensive development on the lines of the community development programme will depend on available resources and the response of the people.

Out of 1,200 to be taken up under the National Extension during the Plan period, the aim is to develop 700 blocks or about 70,000 villages under the intensive development programme and the remaining 500 blocks representing about 50,000 villages under the extension programme.

A comprehensive programme of training of Gram Sevaks (or village workers) under which over 13,000 trained personnel would be available within the next three years for the National Extension Service, has been approved by the Planning Commission. The scheme contemplates expansion and reorganisation of the existing agricultural schools and extension training centres as well as creation of a large number of new basic training schools.

COLOMBO PLAN

The Colombo Plan is six year development plan for "Co-operative Economic Development in South and South-East Asia." Colombo Plan is composite in caracter. Its constituant units are the development programmes of individual countries of South and South-East Asia.

The Plan as drawn up in 1950 included six-year development programmes of Ceylon (£102 million), India (£1,379 million), Malaya and British Borneo (£107 million) and Pakistan (£280 million). The total estimated cost was £1,868 million. The Plan was formally inaugurated on July 1, 1951 and will terminate on June 30, 1957.

The main idea of the Plan is that the countries of South and South-East Asia will make maximum efforts towards their own development while advanced countries will supplement their efforts by providing such assistance as they are in a position to render.

The idea of international co-operation for raising the standard of living of the countries of South and South-East Asia was conceived at the conference of Commonwealth Foreign Ministers at Colombo in June, 1950. It took concrete shape as a plan of development at the second meeting of the Consultive Committee held in London in September-October 1950.

The plan comprehends the respective plans of the individual countries and takes in the account, in overall perspective, the available internal resources and the assistance, both financial and technical which is required to ensure a reasonable pace of development. Thus while the programme of development must be those of the countries of the area, the role of outside countries is one of friend, rendering assistance where needed. To be eligible for outside assistance, therefore, a country must not only pursue its progŗamme of development on its own but must also be ready to do its best for the implimentution of the programme.

The assistance rendered is of two kinds: (1) financial and (2) technical.

Under Colombo Plan, assistance is available in the form of Technological aid. Judicious use of science and technology in South and South-East Asian countries is to be made in side a way that their adoption does not interfere with the local economy by throwing large number of people out of employment. Considerable emphases has been laid on this objective in the Colombo Plan.

Financial assistance has also been provided for in the Plan. This includes the utilization of external assets of the countries of the area, such as sterling balances, foreign private investments, assistance by international institutions like World Bank, and lastly assistance on a government-to-government basis.

For provision of technical assistance a Council of Technical Co-operation has been set up and a £8 million fund has been established out of contributions from member countries of the Colombo Plan.

Since 1950 the membership of the Colombo Plan has increased considerably. The present members are—*Australia, Canada, Cambodia, Indonesia, Malaya, New Zealand, United Kingdom, Burma, Ceylon, India, Laos, Nepal, Pakistan, U.S.A., Viet-Nam.*

The following countries or organisations are observers—Philippines, Thailand, International Bank of Reconstruction and Development, Economic Commission for Asia and Far East (ECAFE), Bureau of Technical Co-operation (Colombo Plan).

ASSISTANCE RECEIVED BY INDIA

The assistance received by India under Colombo Plan till the end of 1952 was as follows—

Australia—Australia's contribution up to the end of July, 1952 was £4·2 million, of which £3·7 million were for supply of wheat and flour and £0·5 for equipmen for the development projects. Australian's contriution for the year ending June 30, 1953 was £3 million.

Canada—Canada's contribution for the year ending June 30, 1952 was $15 million, of which $10 million was utilised for obtaining 114,000 tons of wheat. Of the balance, $4·5 million were utilised for obtaining vehicles for the Bombay State Transport Corporation. Canada's contribution for the year 1953 is $13·8 million.

New Zealand—The contribution of New Zealand amounted to £250,000 in 1952. Under the capital assistance programme, New Zealand is helping to meet the cost of constructing the All India Medical Institute at Delhi. For this New Zealand has paid £250,000 and set aside a further £750,000 to be paid over as progress is made in the construction of the Institute. For 1952, a sum of £375,009 has been earmarked.

United Kingdom—The suggestian made in the Colombo Plan that the accumulated sterling balances of the South and South-East Asian countries should be utilised for financing their development programmes has been implimented by the Government of India and the Government of U.K. An agreement was accordingly signed in July 1953, as a result of which India would be left with adequate balances for her foreign currency reserve at the end of the Colombo Plan period. The rest of the amount will be utilized mainly for development expenditure. In the sphere of technical assistance, India has received experts as well as training facilities for Indians in advanced countries.

ASSISTANCE RENDERED BY INDIA

In addition to being a receipient of assistance, India has also been a donor country in the Colombo Plan. This dual position is explained by the fact that while the development of under-developed areas is the basic idea of the Colombo Plan, India is not under-developed in the sense in which the word is generally understood. While on the one hand, India is struggling with a growing population and a low standard of living on the other, she has made advances in many fields. This advantageous position has enabled the country to offer assistance, mainly by providing training facilities for foreign students.

India's contribution to the £8 million Technical Co-operation Scheme of the Colombo Plan is £750,000 (about Re 1 crore). Till the end of 1952, she had provided five experts to the South-East Asian countries. In 1953 India communicated the names of 39 experts to the Burean of Technical Co-operation (Colombo Plan). Their services can be utilised by the other countries of the region.

Training Facilities for Foreign Students

Fifty-five schlorships and fellowships were offered to the student of South & South-East Asian countries in the first year of the Colombo Plan and 20 in the second year. Facilities for training in the scientific and technical institutions and laboratories have also been offered. The training offered is advanced scientific subjects of the post-graduate standard.

FOREIGN LOANS AND AIDS TO INDIA

INTERNATIONAL MONETARY FUND AND WORLD BANK AIDS

India has received assistance both financial and technical from Colombo Plan countries, from U.S.A. on a bilateral basis, from Government of Norway, from the International Monetary Fund as advance for rectifying a temporary balance of payment deficit, from International Bank as loans for important development projects, from United Nations and its associated organisations as technical assistance and from Ford Foundation, U.S.A.

1. In 1948-49 India purchased $100 million from the Fund to supplement her own current dollar resources.

2. In 1949 first loan of $34 million (later reduced to $32.8 million) from the World Bank for the purchase of over 400 locomotives for railway rehabilitation.

3. In 1949, the World Bank lent India $10 million for a scheme directly calculated to increase indegenous production of food grams for purchasing 200 heavy duty tractors for eradication of kans grass weeds infesting millions of acres of farmland in India.

4. Another loan of $18.5 million for the Bokharo thermal power project which, it is estimated, will generate about 150,000 kw to serve Damodar Valley area, etc.

5. Another loan of $31.5 million from the World Bank to Indian Iron and Steel Co. with the Government guarantee to increase the production of finished steel. This is the departure from the usual practice of the Bank of lending only or through Government Institutions of the borrowing country.

6. Another loan from the World Bank to India amounting to $19.5 million for the construction of two storage dams, two hydro-electric plants and an irrigation system in the Damodar Valley area.

GRANTS FROM SPECIALISED AGENCIES

1. Foundation of a Penicillin Factory at Pimpri, near Poona, capable of producing 400,000 mega units of penicillin every month. Capital cost is to be borne by the Government of India and imports of necessary equipment will be financed by UNICEF and technical assistance will be provided by WHO at a total cost of about $1.2 million.

2. Setting up of a DDT factory with an annual capacity of 700 tons at Najafgarh Road near Delhi. It will cost Rs. 22.45 lakhs to the Government of India; $100,000 to WHO and $250,000 to UNICEF.

3. A new UNICEF programme to assist Bombay Government to increase the supply of milk by setting up a Milk Powder Plant in Bombay with modern refrigeration and bottling equipment.

4. Another UNICEF—WHO venture aims at developing maternity and child welfare services in Travancore-Cochin State.

U. S. ASSISTANCE

1. In 1951 U. S. lent India $119 million for the purchase of about 2 million tons of wheat carrying interest at 2½ p.c. The loan will have to be repayed by 1986.

2. Under Indo-U.S. Technical Corporation Programme, first agreement was signed on 5th January 1952 and upto now 18 operational agreements have been signed allotting to India $133.85 million towards the development of community projects, of agricultural industry through supply of iron and steel and fertilisers, river valley projects, training programmes, malaria control, locust control, etc.

3. Aid received under Point Four Programme consists of technical advice by Americans and training of Indians in various branches of economic activity.

COLOMBO PLAN

1. Australia till June 1953 has alloted £A 7.2 million to India. Of this £A 3.7 million was spent for wheat and flour and the balance being utilised to import equipment for Tungabhadra Project.

2. Canadian assistance totals $15 million and it takes the form of food; $5 million is being spent on the transport of bus chasis for the Bombay State Transport Corporation and the balance on equipment for the Mayurakshi Dam and other approved projects.

3. The entire New Zealand assistance of £250,000 for 1952 and £375,000 for 1953 is to be utilised on setting up and equipping the all All-India Medical Institute at New Delhi.

4. United Kingdom—contribution takes the form of releases from the sterling balances. The latest Indo-UK sterling balances agreement provides for an annual release of £35 million over the period ending June 1357. This will help to undertake the deficit financing to the extent of about Rs. 290 crores as estimated by the Planing Commission during plan period.

INDO-NORWEGIAN AGREEMENT

1. This agreement was signed under U.N. auspices by which Norway provided an initial amount of 10 million kroners (about Rs. 67 lakhs) for Fisheries Community Development Scheme in Travancore-Cochin State. The Norwegian Government will supply experts and equipment.

THE ROCKEFELLER & FORD FOUNDATIONS

1. Ford Foundation has agreed to bear the entire cost of five centres of Rural Development Scheme under Five Year Plan to train key personnel during first three years and of 15 pilot extension projects for two years and one third of the expenditure for the third year.

2. Ford Foundation has also set apart $230,000 for establishing a Programme Evaluation Organization primarily to assess the results of Community Development Projects.

3. The total cost of the Ford Foundation in 3 years will be around $3 million.

4. Rockefeller Foundation co-operates with Central and State Governments in furthering public health plans and has provided fellowship for medical study in Unites States.

5. With Rockefeller Foundation's help a virus research centre has been established at Poona as a wing of the Indian Council of Medical Research.

6. A rural health unit at Najafgarh established by Rockefeller Foundation aid serves 45 villages and trains many health workers in Delhi State.

MISCELLANEOUS

1. Nuffield Foundation, Burma-Shell and Imperial Chemical Industries has also offered a number of scholarships to Indian students for training in the United Kingdom.

INDIAN POLITICAL AFFAIRS

1. GENERAL SUMMARY

The year 1953 is the seventh year of India's independence and it may be usually significant for the future. In it, not only has the First Five Year Plan taken more or less final shape, but owing to the absence of serious external distractions, attention has focussed more on domestic problems and new political patterns seem to be emerging.

Yet it was in this year of mainly domestic interest that India's foreign policy had a great triumph. Her Korean peace plan, at first rejected with contempt by the Communist Powers, later became the foundation on which subsequent and ultimately successful negotiations were built.

Karachi Talks—Relations with Pakistan have on the whole been friendlier than in any previous year, despite much inconvenience, caused especially in the eastern part of the sub-continent, by the introduction of passports. In July, 1953 after many preliminaries, Pandit Nehru met Mr. Mohammed Ali in Karachi and in their talks a wide range of Indo-Pakistan relations were covered. Results achieved seemed small, but the meeting was regarded as a beginning and Karachi's welcome to Pandit Nehru was notably warm.

Indian Citizenship in Ceylon—Before Pandit Nehru's departure for London to attend the Coronation of Queen Elizabeth II and the subsequent Commonwealth Prime Ministers' Conference, it was reported that an agreement with Ceylon on the citizenship problem was ready for signing. This report unfortunately proved false. Though Pandit Nehru had friendly talks with Mr. Senanayake in London, the restrictions Ceylon eventually introduced were far from India's liking. With the rest of the Commonwealth (inevitably with the exception of South Africa) relations have continued to be friendly, though at the UN there were marked differences of opinion with Britain over Kashmir. Mr. Nehru has also spoken critically of British policy in Kenya.

Cordial Relations—On his way to and on his way back from Britain, Mr. Nehru had friendly talks with General Neguib and at the Commonwealth Conference he was able to get general agreement about the importance of respecting Egypt's sovereignty. Relations with Burma have been cordial. Mr. Nehru and U Nu together toured the NE frontier area and a fresh trade agreement was reached in New Delhi, though India considered the price of Burmese rice too high for additional purchases.

Political turmoil in Nepal has been watched with much concern, but India has sought to avoid giving advice or help except when it has been plainly asked for, as for example, in July when assistance was given in rounding up insurgents in Western Nepal. No progress has been made over the remaining foreign enclaves. In protest against Portugal's refusal even to discuss her possessions in India, the Indian Minister was withdrawn from Lisbon in June, 1953.

Andhra State—At home a step of much potential importance was taken in December when it was decided to set up an Andhra State. It has not as yet caused much pressing of other linguistic demands, except in the Punjab by the Akali Sikhs and in West Bengal, whose demand however is chiefly for living space. It has, however, encouraged the agitation for dismembering Hyderabad and led to dispute among Andhras themselves over the site of the capital and much besides, including of course, boundaries—and here Mysore is involved.

Kashmir—During the later half of the year 1953, there was a remarkable development in Kashmir. Sheikh Abdullah who, till lately, was immensely popular not only in his own State but in India generally, was dismissed from the premiership and arrested on a formidable indictment.

Alliances:—Conceivably what has begun to emerge is a real, perhaps a nationwide, Opposition, though its composition is far from clear. The merger of the Socialist and KMP parties to form a Praja Socialist Party, which has lately had an accretion from a section of the Forward Bloc is perhaps less significant than the working alliances formed, sometimes between parties diametrically opposed to one another in most respects, to achieve some immediate object, whether it be to win a by-election or prevent an increase in fares. Such alliances may be thought to indicate more regard for expediency than for political consistency or even morality. But this is beside the point. What they illustrate is the wide extent of common ground in which an Opposition can operate. It is ground which the Government or perhaps more accurately, the Congress Party has lost. Having re-elected Mr. Nehru as President and seen the Plan in print, the Congress seems inclined to rest on the laurels won at last year's elections. It can still afford, except in some closely balanced States, to lose by-elections; it can even afford to create that form of pseudo-opposition which arises from faction in its own ranks. But it will at peril neglect its long-term interest.

The Plan:—The plan has its limitations, as well as its very considerable merits. In it may be found something about almost everything, and usually it is something sensible. It has been praised not only here but abroad. But for the majority of even literate people, it is little more than a book, a large book and usually a closed one. Some of the illiterates are more fortunate. They make practical acquaintance with it in the Community Projects, but they too see only a little bit, even if it is for them, the bit that counts most. Except in a totalitarian State, faith in an economic plan has to be built on work. And these must be the sort of work that are evident to everybody. That works exist is plain to those who make a trip, for example, to the Damodar Valley and see the Tilaiya Dam and the Bokaro power station which were inaugurated during the year. But such visitors are few compared with those who find themselves out of work, with rice and other important commodities more costly. To such people, references to the Plan seem complacent excuses for inaction.

Food Policy:—A food policy of gradual decontrol has not persuaded everybody to agree with its author about its success. Crops are said to be abundant and the carrying over may be large, but people go hungry. An official explanation is lack of purchasing power. Scarcity in various parts of the country has, however, been too evident to deny. As usual, besides draught, there have been widespread floods, in some areas twice during the year. In West Bengal, despite what is estimated as a bumper crop, the levy system of procurement has failed dismally.

Industries—Decontrol has been applied still more liberally to cloth. It too, however, not many can afford to buy in quantity, in spite of presumably abundant stocks.

Sugar has been both scarce and expensive. Measures have been adopted to make supplies more abundant and cheaper.

No industry had, during the year, a more remarkable history than tea. Hundreds of gardens were at one time closed. A cut in production, rising prices abroad and the admirable co-operation of labour with managements in economy measures have enabled the tea industry to weather the crisis.

Jute, as usual, has caused intermittent concern. The industry sent delegations to both the U.S.A. and Australia to investigate market prospects. Towards the end of the year, conditions seemed to be getting more stable. The Ministry of Commerce and Industry has appointed a commission to inquire into marketing practices in both the raw jute and the jute goods trade.

Expansion of the iron and steel industry has been gravely impeded by a protracted slow-down at Burnpur owing to a quarrel between rival trade unions. This is a disappointing sequel to the Indian Iron and Steel Company's success in negotiating a loan from the World Bank.

Coal's chief difficulties appear to be a declining export market and shortage of wagons. About this shortage there continue to be complaints from many quarters, some of which attribute it to regrouping. The railways, however, with their centenary during the year, are sceptical, pointing to examples of "ghost" indents.

Air lines have been nationalised and the automobile industry is to be rationalized.

Unemployment—Unfortunately unemployment seems to be growing, and the problem of the educated unemployed in particular is causing anxiety. Various remedies have been suggested, but almost all are on conventional lines and seem likely to be slow in producing results.

Years' Deaths—By the death of Dr. Shyama Prasad Mookherjee, while under detention in Kashmir, India (and West Bengal in partigular) has lost a leading citizen and the Parliamentary Opposition, its most distinguished figure. The circumstances of his death suggest to many lack of adequate care and an inquiry has been widely demanded, but not as yet conceded.

Another distinguished Bengali to pass from the scene was Mr. N. R. Sarkar, distinguished alike in politics and business. The Mayor of Calcutta, Mr. N. C. Chunder, died while still holding that office. In February, the Central Cabinet lost one of its ablest members in Mr. N. Gopalaswami Ayyangar. In April, there died in Switzerland, where he was India's representative, that ardent nationalist Mr. Asaf Ali. South India lost two leading figures, Mr. T. R. Venkatarama Sastri, the veteran liberal, and Mr. R. K. Sanmukham Chetty; like Mr. Sarkar a distinguished business man whose talents had led him into politics. That pioneer industrialist, Mr. Walchand Hirachand died in Gujarat.

II. DEVELOPMENTS IN KASHMIR

For some time opinion in Kashmir was gathering for closer contact with India. Sheikh Abdullah for reasons best known to him, was talking inconsistently and delayed the implementation of the Delhi Agreement of July 1952. Disturbances broke out in Jammu demanding four things: Complete accession of Kashmir to India; application of the Constitution of India; fundamental rights as are enjoyed by the Indians and the extension of the jurisdiction of the Supreme Court to the State. Sheikh Abdullah did not like the Jammu agitation and he used force to crush the Praja Parishad movement in Jammu. He dubbed it as communal, forgetting that the movement was mainly political.

The split between India and Sheikh Abdullah goes back to the election of the Constituent Assembly in 1951. The Assembly was elected at Abdullah's insistence; but it was India which had to accept the UN's displeasure; and in the elections of the National Conference—Abdullah's party won all the seats. In the Kashmir Valley, since the pro-Pakistanis were not standing, this may well have represented the electorate's views. In Jammu, it undoubtedly did not. The main opposition party, the Parishad, withdrew on the grounds that the elections were being rigged, and proceeded to start a movement for complete accession of Kashmir to India. This movement was not in the early months very important, but, as time went on, it brought two points very forcibly to the attention of the Indian public. First, they discovered that there was a Jammu, that it was quite distinct from Kashmir, and that it had a whole series of grievances even against the best reforms of the Kashmir Government; all the provisions of the land reforms, for example, were based on Kashmir conditions, and did not always apply to Jammu's drier soil and different social structure. The Indian public will now regard it as a grave dereliction of duty if their Government accepts a plebiscite on terms which do not make it certain that Jammu, and also Buddhist Ladakh, can come to India whichever way the Valley votes.

The other effect of this Jammu agitation, quite limited and partly inspired by vested interests though it was, was even more important. It revealed to India how near independence Sheikh Abdullah's autonomy was, how many privileges it involved for Kashmir, and how few duties. Abdullah increasingly felt that more time was needed to decide the Kashmir problem, that perhaps the idea of independence which the Korean war had made him discard, should be disinterred, that despite past Pakistani aggression, India and Pakistan should be considered equally as possible patrons of Kashmir. He refused to talk to the Parishad leaders and he forcibly put down their agitation.

The Government of India supported him, but there was increasing uneasiness in India. In so far as the people of Jammu were Hindus wanting freedom from Moslem rule, they got little sympathy; that was communalism. But, in so far as they were asking for the Indian fundamental rights (including the right of compensation for property taken in land reforms which Kashmir alone has not allowed), for the Indian flag, and for completely common citizenship, it was difficult for Indians to see why their demands were unreasonable. Yet the proceedings of the Constituent Assembly made it increasingly clear that Abdullah would never accept them, that he wanted the absolute maximum of separateness. India had thought that the Constituent Assembly would define Kashmir's relations with India, would make it part of India, with however special a status. Instead the Assembly clung to every symbol of sovereignty.

Eventually in the summer of 1952, pressure from India forced Sheikh Abdullah to come to Delhi to discuss the position, and the Delhi Agreement was the result. Yet the Agreement only led to a further drifting apart. Sheikh Abdullah got every thing he wanted; the Maharaja went, though he was popular in Jammu; the State flag was recognised; residuary powers were to be with the State. In return, India got the power of reprieve for the Indian President and the recognition of the Indian Supreme Court as the tribunal for disputes between the Centre and the State. All the other vital issues, like fundamental rights, citizenship, financial integration, were postponed. And over the last months it became more and more clear that Abdullah was determined to do nothing about them. This not only distressed Delhi and gave a fillip to communalism in India; it also split the Kashmir Cabinet. The two Hindu members were, naturally not satisfied, and Bakshi Ghulam Mohammad was sufficiently practical to realise that Delhi, long suffering though it had been, was bound in the end to turn. The crisis came when Abdullah demanded the resignation of one his Hindu Cabinet members, only to find that Bakshi—the party organiser—had turned against him and taken the party away from him.

Change in Abdullah:—A remarkable change came over Sheikh Abdullah in the beginning of May 1953. This was reflected in his conduct and his speeches. Ideas to which he had earlier given only passing expression appeared to have developed into an obsession. This first appeared forcefully during a Working Committee Meeting on May 18. The meeting discussed the implementation of the Delhi Agreement but soon disagreed on the issue of the Supreme Court's jurisdiction. The majority favoured extension of the Court's authority to civil and criminal appeals, but five members led by Sheikh Abdullah opposed this.

The issue was referred to a sub-committee of lawyer members who met at the Sheigh's request. Although he is not a lawyer, the Sheikh himself unexpectedly attended the meeting and spoke for two hours. "We have not to think of little things like the Supreme Court", he is reported to have said, "We have in fact to evolve a new relationship with India." There was nothing more for the sub-committee to do, and it adjourned.

The New Basis:—During the next seven days, the Working Committee discussed Sheikh Abdullah's "new basis", but it failed to secure a single new adherent to the idea of an independent Valley. The division remained unchanged—five in favour and fifteen against.

Hearing reports of Sheikh Abdullah's changed front, Mr. Nehru arrived in Srinagar before his departure for London in the last week of May, 1953. At his reception the Indian flag was nowhere in evidence. Only the Kashmiri National anthem was sung. The implied disrespect was not lost on India's Prime Minister. Never was Mr. Nehru's fund of patience more taxed, but he displayed no annoyance, only counselling patient thinging.

Addressing the Conference Working Committee, Nehru dwelt at length on the dangers of establishing an independent Valley 80 miles long, 20 miles broad and with a population of only one and a half million. India could not agree to the proposition, which was bound to convert the Valley into an arena of international intrigue. Nor could India remain unaffected by developments that might follow.

Mr. Nehru also reminded them the possible effects on his position in the Congress, the Congress Party's future, the communal balance which continued to be delicate, and the future of minorities in the country.

The Sheikh was completely unmoved. The day after Mr. Nehru's departure the Working Committee met again, but the rupture was unhealed. Sheikh Abdullah again appointed a sub-committee to suggest possible alternative proposals to take the place of the present relationship with India in case Kashmir had to submit one for the consideration of the Prime Ministers of India and Pakistan. He was inspired, he said, by the need to assist them in bridging their differences. Many suggestions were put forward, including a plebiscite in the entire State, a regional plebiscite, the independence of the whole State, a communal division, a condominium, the cease-fire line to be made permanent, accession to Pakistan, and independence of the Valley. The Sheikh persistently demanded an independent Valley, discarding all other proposals including the present limited accession. The majority members of the Working Committee of the National Conference held that independence would in fact, be the worst form of dependence not only on the two neighbours but also on the goodwill and financial assistance of a number of other big foreign powers. Sheigh Abdullah was disappointed but not beaten. He evolved a new way of achieving his new ideal.

There is basis for the belief that, if India has reason to be unhappy at Abdullah's political defection, Pakistan has no particular cause to be jubilant, for what he at heart desired was a negotiated independence of the Valley guaranteed and financed by both neighbours.

Organizationally, Abdullah's new stand was not sanctioned by the National Conference, which officially continues to support accession to India. His colleagues became so much disillusioned that they arranged for his replacement and arrest. The clash which developed was inherent in the discussions of the Working Committee, whose daily proceedings were public knowledge in Srinagar. For three weeks, the city was a colossal open-air debating society in which partisan crowds participated. Independence was hardly understood; it was too abstruse a conception. To most people it was associated with Pakistan.

Sheikh Abdullah delivered the following speech at Srinagar two days before his arrest:—"The third course open to us is still to be discussed. We have to consider the alternative of making ourselves an Eastern Switzerland, of keeping aloof from both States but having friendly relations with them. This might seem attractive. It would appear to pave the way out of the present deadlock. To us as a tourist country it could also have certain obvious advantages."

What then brought about this change ? Even as April 13 last he made a most conciliatory speech on the radio. On May 18, on the other hand, he revealed a different facet of his mind to the Working Committee. His friends recall his interviews to a foreign correspondent in 1949, and later to other, showing that thoughts of independence had existed in his mind for some time. They flowered in the heat of the Praja-Parishad movement.

As the Parishad movement developed in intensity and violence, Muslims from the Valley visited Abdullah in Jammu to ask about their future.' He counselled patience. It appears he was planning to avenge himself against the Parishad and its Indian supporters. He could think of no better recipe than to let the movement grow, as it served his newly-conceived ambition to escape from the Indian association. He did not seek to mollify the Dogras. The more the Parishad harped on merger the more he withdrew into the Valley.

Having thus mentally written off Jammu, he was greatly concerned with his hold on Kashmir. If he could not be Prime Minister of Jammu and Kashmir, he could at least continue as the leader of the Valley. How completely his mind was closed to India during the last few weeks is borne out by his stand in the Working Committee, his behaviour towards Mr. Nehru as well as to Maulana Azad, whom he subjected to a long anti-Indian public harngue, his refusal to visit India, and more recently by declining to receive Mr. Rafi Ahmed Kidwai, who wished to visit him. "If the Government of India has anything to say to me, it had better do so in writing", he said. So far as he was concerned, he had broken off relations. He was not even on speaking terms with Mr. Nehru.

He was whipping up an anti-Indian movement. Having made a vain attempt to secure the support of the Working Committee and his Cabinet, he turned his back on both, saying the people alone counted. During the last six years he had disdainfully refused to mix with his party workers. Now he started to address them behind closed doors, later issuing different versions of his own speech, one for his party paper *Khidmat*, one for the radio, and another for the Indian Press.

Every speech added to the confusion. He harped on the possibility of the "third course" and excessively criticized India, which was not, he said, honouring its pledges, and for its allegedly communal policies. Mr. Nehru, he said, was little different from Indian communal leaders who wanted to "swallow" Kashmir.

Sustained and sincere effort was made to convince him that if he had any genuine grievances against India, these could be redressed by discussion. But he wanted no truck with India until it agreed to guarantee the Valley independence by revoking the accession.

Finally he announced a date, August, 21, 1953 when he was to proclaim his final views before an audience of 100,000 on the occasion of Id prayers. "On that day I will reveal my plan," he said in a speech two days before his arrest.

Abdullah Dismissed and Arrested—Abdullah was dismissed from the Prime Ministership of Jammu and Kashmir on August 8, and was arrested at 10 o'clock the following day at Gulmarg. Mirza Afzal Beg, Sheikh Abdullah's chief supporter in the dismissed Cabinet was also arrested. Abdullah has been confined in a palace in Udhampur district. The charges against Sheikh Abdullah and others who have been arrested under the Public Security Act included disruptionism, corruption, nepotism, maladministration and establishing of foreign contacts of a kind dangerous to the peace and prosperity of the State.

The Sadar-i-Riyasat's order dismissing Sheikh Abdullah referred to the existence of acute differences in the Cabinet. "A stage has been reached in which the very basis of an honest and efficient administration has become impracticable."

The Order said, "I, Karan Singh, the Sadar-i-Riyasat, functioning in the interests of the people of the State who have reposed the responsibility and authority of the headship of the State in me, do hereby dismiss Sheikh Abdullah from the Prime Ministership of the State of Jammu and Kashmir and the Council of Ministers headed by him is dissolved forthwith."

The Sadar-i-Riyasat called upon Bakshi Ghulam Mohammed, Deputy Leader of the majority party in the Legislative Assembly, to form the Government. Bakshi Ghulam Mohammed was sworn in by the Sardar-i-Riyasat as Prime Minister on 9th August, 1953.

Pandit Nehru's Statement on Kashmir: On 10th August, 1953, Pandit Nehru made a statement in the House of the People on the developments in Kashmir. He said—"Certain events have occurred in the State of Jammu and Kashmir with dramatic suddenness during the last two days, and am therefore venturing to take some time of the House in placing before it such facts as we know them. Not only this House but the country at large must have viewed these developments with anxious concern. The State of Jammu and Kashmir has been to us not merely a piece of territory which acceded to India 5¾ years ago, but a symbol representing certain ideals and principles for which our national movement always stood and which have been enshrined in our Constitution. It was a community of those ideals and principles which brought the State in a moment of grave crisis in October 1947 into the larger family of India.

"But even before that constitutional development took place, a devotion to these ideals and certain common purposes had brought the national movement of Jammu and Kashmir State in line with the struggle for freedom that inspired our people. In Kashmir State, it was the National Conference which represented this struggle and spoke on behalf of the masses of the people there. The association of the State with India, therefore, had a deeper significance than even the constitutional link that was built up.

"Much has happened during these years and we have faced trial and tribulation together. Even at the time of the accession of the State to the Union of India, it was made clear that it was for the people of the State to determine their future when suitable opportunities for this arose. The union was a free union of free people without any compulsion on either side. It was recognized from the very outset that the peculiar position of the State made it necessary for a special position to be accorded to it in our constitutional relationship.

"Later, when the Constitution of the Republic of India was drawn up and finalised, this special position was recognised and it was made clear that any change in our addition to that position would depend on the wishes of the people of the State as represented in their Constituent Assembly. The subjects of accession were three, namely, Foreign Affairs, Defence and Communications.

"In an agreement that was arrived at last year, known as the Delhi Agreement, certain consequential and implied powers were defined. But the essential subjects of accession remained the three alrady mentioned.

"I mention this because much confusion has been caused by forgetting the basic fact that we have always stood for a special position of Kashmir State in the Indian Union. Some People have talked of *merger*. That word, of course, is totally inappropriate in any event and, to the extent it meant something beyond the constitutional position and our present agreements, was opposed to our policy and those very agreements. Others advocated a weaker association which would also have been against the basic policy that was agreed to and would have involved grave difficulties.

"In recent months, an unfortunate agitation sought to undermine this basic position and create not only confusion but also powerful reactions, more especially in the Valley of Kashmir. That has been one of the important causes of the difficulties that the people of Kashmir and of India have had to face. Unfortunately, some persons in the State were so affected by this agitation as to forget the community of ideals and principles which had brought Kashmir and India together.

"It was still more unfortunate that wrong advice was given by them to Sheikh Abdullah who was the acknowledged leader of the national movement in the State and the Prime Minister. Certain utterances of Sheikh Abdullah reflected this advice and created confusion in the minds of the people of the State. Disruptive elements, who had not accepted the principles on which the democratic movement in the State had been built up, took advantage of his position and attempted to disrupt the State. At a time when economic problems of grave import all over the State demanded attention and solution, the Government of the State was divided and ceased to function effectively.

"A serious situation was thus created and there was progressive tendency towards disruption. The Government of India was naturally gravely concerned at these developments, but it did not wish to interfere, except with advice, in the internal structure and the administration of the State. Advice was frequently given but unfortunately it did not succeed in bringing about that unity which was shaken in the course of the past few months.

"Some two weeks ago, two Ministers of the Kashmir Government, Bakshi Ghulam Mohammed and Mirza Afzal Beg, visited Delhi and had prolonged consultations with us. We pointed out to them the necessity for resolving their differences and working as a team in furtherance of the aims and objectives of the State. We assured them that we recognised the special status of the State and the Government of India did not wish to interfere in any way in internal problems which should be decided by the Government of the State.

"We were anxious to help financially and in other ways in the development of the State and were interested in the maintenance of security and order of the State.

"A few days ago, we were informed that the differences within the Kashmir Cabinet had become even more pronounced and, in fact, Ministers publicly spoke against and criticised each other and advocated rival policies. The majority in the Cabinet adhered to the objectives for which they had always stood. One member of the Cabinet, Mr. Beg, however, progressively encouraged by Sheikh Abdullah, opposed these policies. A considerable majority of the Executive of the National Conference sided with the majority in the Cabinet and against the Prime Minister. The break was almost complete and it was impossible for the Government to carry on in this way.

"When we were informed of this and our advice was sought, we urged that some ways should be found for the working of the Cabinet as a team on agreed principles and policies. This was an internal matter and we did not wish to interfere. Our interest was in a peaceful and progressive Government having the support of the people. Three days ago we learned of the demand made by Sheikh Abdullah to one of his Ministers to resign and the latter's refusal to do so. Events then moved rapidly. We were informed of them, but our advice was neither sought nor given. On August 7, the majority of the Cabinet presented a memorandum to Sheikh Abdullah in which they pointed out that a factional tendency had been evident in the Cabinet and this was responsible for a progressive deterioration in the administration, as their advice has been disregarded and that the Cabinet as constituted, could not continue. They communicated this memorandum to the Head of the State, the Sadar-i-Riyasat.

"On August 8, the Sadar-i-Riyasat sent for Sheikh Abdullah and conveyed his deep concern at the serious differences which existed in his Cabinet. He impressed upon him the immediate necessity for restoring harmony and unity of purpose among the members of his Cabinet in the exceution of his policy. Sheikh Abdullah could not give any assurance about the future and to how he would be able to overcome these differences.

"The Sadar-i-Riyasat thereupon suggested than an emergency meeting of the Cabinet should be held at his residence that evening so that the possibilities of securing a stable, unified and efficient Government for the State could be jointly explored. Sheikh Abdullah however did not agree to this. Later in the day, the Sadar-i-Riyasat wrote to Sheikh Abdullah pointing out all these facts and stating that in these conditions he had been forced to the conclusion that the present Cabinet could not continue in office any longer and hence he had decided to dissolve the Council of Ministers. A formal order to this effect was passed and a copy of it sent to Sheikh Abdullah.

'I should like to repeat that we have considered these recent developments in Kashmir as an internal matter with which we should interfere as little as possible. On the larger issues our policy remains what it was and we shall stand by the assurances we have given."

III. LINGUISTIC STATES AND THE CREATION OF THE ANDHRA STATE:

The demand for formation of States on linguistic basis is fairly gaining ground. In the South, the movement was gaining strength and in the midst of such a situation on October 19, 1952, Sri Potti Sriramulu, a veteran Congressman, resorted to fast unto death on the issue of the formation of the Andhra State. The struggle for an Andhra State had reached its climax with the death of Potti Sriramulu. The Government of India specifically agreed to the formation of a separate Andhra State and appointed a commission under Justice Wanchoo to report on the matter by the end of January, 1953.

On Dec. 3, 1952, Pandit Nehru told the Council of States that Government of India was willing to take immediate steps for the formation of a separate Andhra State. But the State would be constituted only with the Telegu-speaking areas of the present Madras State and the City of Madras would in no case be included in the new State.

A reference to the question of redistribution of West Bengal's boundaries with Behar was made by the President, speaking at a civic reception given to him by the Calcutta Corporation on 27 December, 1952. Dr. Prasad said that readjustment of boundaries was a political question which should be settled through mutual consultations. He advised persons against mixing up the question with the problem of resettlement of displaced persons. He suggested that the two questions—rehabilitation of displaced persons and redistribution of State boundaries—be kept apart and treated separately. Mixing them would not serve any useful purpose.

The Government of India have a Commission on Linguistic States. The Commission's terms of reference have include feasibility of redistributing States on a linguistic basis and also whether any such State after the formation could be economic and viable unit.

The Commission would examine all aspects of redistribution on linguistic basis and recommend measures for the creation of these States. Then the Government would draft a bill on the basis of the Commission's report and a call for public views on the bill.

Inauguration of the Andhra State: The new Andhra State was inaugurated on October 1, 1953. The inauguration marks the successful conclusion of an agitation launched forty years ago. Led mainly by Congressmen, the movement, in its earlier stages, followed the line of least resistance and did not prejudice the larger struggle for the country's independence. But with the achievement of Independence in 1947, the Andhras became more restive. A three-man committee set up by the Congress in December 1948 consisting of Mr. Nehru, Sardar Patel and Dr. Pattabhi Sitaramayya (then President of the Congress) recommended the formation of the Andhra State if the Andhras gave up their claim to Madras City. The report was accepted by all, though the Andhra PCC demanded the constitution of Madras City into a Chief Commissioner's unit.

A Partition Committee was set up by the Madras Government in December 1949, and it submitted its report with a dissenting note by Mr. T. Prakasam. The Government of India decided not to take any action on the report.

Frustration grew among the Andhras and the movement took a new turn. Swami Sitaram undertook a fast in August 1951, but nothing came out of it except greater frustration. And then on October 19, 1952, Potti Sriramulu, a disciple of Mahatma Gandhi, started a fast unto death, and died on December 15, 1952.

Four days later, the Prime Minister, Mr. Nehru, came out with a statement that the Government of India had decided to form an Andhra State with all the Telegu speaking areas excluding Madras City. Mr. Justice Wanchoo of the Rajasthan High Court was appointed to go into the financial and other implications of the formation of the new State, and Mr. Wanchoo, after undertaking a tour of the Andhra area, submitted his report on February 7, 1953.

The Prime Minister made a statement in Parliament on March 26, 1953, defining the limits of the new State, and fixing October 1, 1953 as the date for its coming into existence.

IV. REORGANIZING NEFA ADMINISTRATION:

A new deal for the tribes who inhabit the north-east frontier of India is envisaged in a scheme sanctioned by the Government of India. Under this, the administration of the North-East Frontier Agency will be expanded with the object of building up an efficient machinery for carrying out development and nation-building activities for the economic progress and social welfare of the tribes. As the first major step to reorgaoise the administration of the NEFA, the Central Government announced the appointment of a new adviser to the Governor of Assam.

Under the Regulation known as N. E. Frontier Areas (Administration) Regulation I of 1954, this N. E. Frontier Areas will be known as N. E. Frontier Agency consisting of North-East Frontier

Tract including Balipara Frontier Tract, Tirap Frontier Tract, Abor Hills District, Misimi Hills District and Naga Tribal Area.

24 posts of Political Officers and Assistant Political Officers are to be filled immediately by selection from the existing and civil and defence services as well as from outside. The fact that Nagas are now demanding a separate independent state and the murder of nearly 70 Indians by the Daflas on October 22, 1953 have called for this new set up.

The north-east frontier tribal areas are a country of high mountains, rivers and vast wildernesses. NEFA comprises an area of 33,000 square miles with a population of about 625,000 composed of twelve different main tribes. In extent, therefore, it is larger than West Bengal. This vast area which is inhabited by virile and highly developed tribes, was a partially or totally excluded area during the British regime. There was no administration except for occasional expeditions led by British officers. Indians were not allowed to come in contact with the people and, in fact, the tribal people were made to believe that Indians were hostile to their culture and wanted to absorb them completely.

In 1947 free India was faced with the problem of tackling this strategic but unexplored area with practically no administration and of re-establishing contacts with a people who had been isolated from the rest of India for over a century. There were no roads connecting this area with the rest of Assam. Economically, the tribes were very backward as there was hardly any trade with the rest of India. Socially they had built up their tribal organizations which maintained some kind of law and order but there existed in some places head-hunting and slavery.

The Government of free India gave these NEFA areas a special place in the Constitution. They are now administered by the Governor of Assam as the Agent of the President of India ; and the Central Government, through the Ministry of External Affairs exercise administrative control. The Government of India have advanced the administration almost to the border and built up a number of roads connecting the district and sub-divisional headquarters in the Agency. The Assam Rifles, which is a civil police force run on military lines, has established a number of outposts in this Agency.

Under the Rs. 3-crore First Five Year Plan for this Agency, a great deal of developmental work is in progress or has been planned. Roads are being built with the help of the Military Engineering Service and the CPWD. A number of agricultural farms and seed stores have been opened and training in agriculture and animal husbandry is being given to the tribal youths. A number of schools and dispensaries have also been opened where, apart from giving educational and medical facilities, tribal men and women are being trained as compounders, nurses, school teachers, etc.

V. CHANDERNAGORE

This settlement in West Bengal voted itself in June 19, 1949 out of the French Union by 7,473 votes against 114. Excepting that this small town is now being administered by the Government of India, its status in the Indian Union has not yet been finally decided. But complications have sprung up and the leaders of Chandernagore have started dictating India. The crux of the demands is that Chandernagore should not be treated as a Municipal borough of West Bengal, but should have an elected body, "which will exercise administrative and financial control over its affairs within the orbits of West Bengal." Their main demands are as follows:—(*a*) Chandernagore should have a Council of Representatives elected on the basis of adult franchise, (*b*) This Council should pass the Budget, decide fiscal policy and shall elect an Executive Body. (*c*) The members of the Executive Body shall carry on administration of different departments. (*d*) There shall be an officer of the Government of West Bengal who will act as a liaison officer between the Council and the State Governments. (*e*) Chandernagore shall have representation in the State Assembly and the Central Parliament.

INDO-PAKISTAN RELATIONS

The Indo-Pakistani relations in 1953 showed little appreciable improvement, although outwardly there were some gestures on both sides to improve the situation. Three matters are important stumbling blocks that are obstructing the settlement of the outstanding disputes; these are—*Dispute over canal water, Kashmir issue* and the *Evacuee property dispute.*

I. DISPUTE OVER CANAL WATER

Before going over the disputes, it is better to have some knowledge about the canal system of the Punjabs (both Indian and Pakistan). The rivers—the Sutlej, the Beas, the Ravi, the Chenab and the Jhelum are spread over the province like the five fingers of a hand, yet this vast tract of land is dry. The deserts of Rajasthan exerts a climatic effect, and secondly, these rivers which are fed by the glaciers of the Himalayan range, do not maintain a regular flow throughout the year and thirdly, the few that have a regular flow, empty themselves into the Arabian Sea.

Irrigationists, in solving this problem, have run a number of canals to connect one river to the other and thus the rivers which flowed directly and wasted its water into the sea, now enrich their sisters and this vast water resource caught in the country has turned the desert into a green and fertile land. These canal colonies of the Punjab nearly accounted for 44 p.c. of the total irrigated areas in undivided India. There are six important canals:

(1) **West Jumna Canal:** It irrigates Rohtak and Hissar districts and the States of Patiala and Jhind as well. With its 1900 branches the canal supplies water for an area of 8·90 lakh acres of land.

(2) **Sirhind Canal:** It begins at Rupar on the Sutlej and

irrigates Ludhiana, Firozepur and some parts of Hissar and the Nabha districts.

(3) **North Bari Doab Canal:** It starts from Madhupur on the Ravi and irrigates Lahore, Gurdaspur and Amritsar.

(4) **South Chenub Canal:** This is the longest canal in India and second in importance in the Punjab canal system. It starts from Khanki with the waters of the Chenub and flows through Gujranwala, Sheikhupura, Lyallpur and the Jhang district. The waters of this canal have transformed this land from a desert into a rich and populous tract of land. Formerly population here was only ten per square mile, whereas it is now more than 300.

(5) **South Jumna Canal:** With its 583 branches it waters nearly 8·60 lakh acres of land of the North-East Punjab.

(6) **North Beas-North Chenub South Bari-Doab Canal:** This is what is known as the "triple project". Though originally all these had no regular flow yet now the flow is concurrent and it is regarded as a great achievement in irrigation.

The Beas has generally a fine flow throughout the year; the Ravi and Chenub have little flow. So a canal has been constructed from the Beas and through the Chenub it has been connected with the Ravi. Thus all of these rivers now enjoy a regular flow of water.

For some time Pakistan was accusing India for alleged interference with her water supply. Pakistan was pressing for arbitration by third parties, while India suggested that a Commission composed of an equal number of representatives from each side should settle the dispute. India considered her water to be her own, and there was no rule of international law imposing any obligation on an upper riparian State for the benefit of a State lower down the river. It may be pointed out here that the USA was not prevented from building the Boulder Dam over the Colorado river because Mexico was adversely affected.

Notwithstanding the fact that India has unrestricted right over the Indus water, she entered into an agreement with Pakistan in 1948 by which she undertook not to reduce the supply of water to Pakistan all at a time, but progressively, so as to enable Pakistan to develop alternative sources. India claims that she has kept this agreement, but that Pakistan repudiated it in 1950. Pakistan stopped the payment of "seigniorage" charges and the capital costs of certain works which she promised to deposit with the Reserve Bank of India.

India in fact has not yet followed her rights under the 1948 agreement. There are only two canal systems in dispute out of a total of 31—the Central Bari Doab from the Ravi and the Dipalpur from the Sutlej. No new canal works have been built by India to use Ravi water, and the Harike and the Bhakra-Nangal works which will use the Sutlej water are not yet ready. The Harike weir and canals will be completed in 1954, and the Bhakra project in 1959. This season there has been drought in both the Punjabs and the flow of the Ravi and the Sutlej were below 45 per cent of the normal. Pakistan consequently received less water—and this is purely due to drought. India did not cut water supply to Pakistan.

Before partition, the West Punjab and Sind were better irrigated than the East Punjab. The British preferred to undertake irrigation works in West Punjab and Sind, as they were partly paid for by selling land. In the east Punjab land being mostly privately owned, the cost of irrigation works had to be paid by the Government and as such they did not undertake much irrigation works in this region. India's point is that more than five million refugees migrated from west to east Punjab after partition and they have to be rehabilitated in under-developed and unirrigated areas. On humanitarian ground India requires the Indus water flowing through her own territory and Pakistan is quite unjustified in basing her claim on grounds which remain unsupported by international law.

Of the six rivers in the Indus basin, India gets little water from the Indus and from the Jhelum. The former carries more than half the total amount of water carried by all the six rivers put together and these two rivers flow only through the mountainous regions of Kashmir where no use of their water can be made. India at present does not get anything from Chenub. She however hopes to use 3½ million acre feet of Chenub water by erecting a tunnel through from the Chenub to the Ravi and therefrom a link canal to the Beas in Himachal Pradesh. India will however make use of the water flowing to the sea, and not from Pakistan's water. The Ravi, the Beas and the Sutlej rivers have among them less-than one-fifth of the water of the Indus basin water as she will have the rest. The Harike wier would divert 8½ million acre feet of Beas water and the Bhakra Dam would store 1½ million acre feet of Sutlej flood waters. Some flood waters of Ravi may in course of time be diverted to the Indian Upper Bari Doab system.

Under 1948 agreement, Pakistan has undertaken to build a canal across the Punjab for the purpose of bringing water from the Indus and Jhelum over to Pakistan Ravi and Sutlej and this will replace the water that may be cut off by India. Pakistan has already dug a canal and another will be completed shortly. But instead of building up the other canal, and necessary cross canals, Pakistan is now engaged in using its Indus water on new barrages in upper Sind and at Dehra Ghazi Khan in the Punjab. This is an attempt by Pakistan to keep its own water and at the same time compel India under the compulsion of international opinion to supply her with Indian water. Pakistan is thus trying to have both ways to her advantage.

Further, in recent years, there has been a considerable switch in Pakistan from wheat to cotton cultviation and cotton needs water for maturing when the wheat must get it for sowing. The water scarcity in Pakistan is therefore also due to change-over in vegetation. Sikhs before partition held considerable land in Pakistani canal colonies and they were farmers of irrigated land. But Muslim refugees from India who have now taken their place are mostly labourers and a small number of them are farmers and are used only to dry farming. Pakistan's case therefore for water from the Indus basin is made by outside wire pullings in order to just to keep India embarrassed.

A Press Note issued by the Government of India on the Canal water problem states: "The Government of India have noted with regret the intensive propaganda being carried on by Pakistan on the canal waters issue accusing India of deliberately following a policy of causing deep injury to Pakistan by withholding canal waters. Serious charges against India have been made not only in the press but also by leading personalities in Pakistan. Recently, the Pakistan Government issued a press release containing statements far removed from the facts and making totally unfounded accusations against India.

As is well known, engineers of India and Pakistan have since May 1952 been engaged, at the initiative of the World Bank, in preparing a comprehensive plan of development of the waters of the Indus basin intended to solve the water dispute between the two countries. When the working party had an understanding that while the negotiations were in progress, all unnecessary controversy should be avoided. It is therefore all the more surprising that the Government of Pakistan should have countenanced a propaganda campaign in violation of this understanding and at a time when the engineering negotiations are making good progress.

After a full and careful enquiry it has been established that the complaint referred to have no substance. It is significant that Pakistan has not lodged any protest whatsoever to the Government of India. There are only two canals in Pakistan which get supplies from headworks in India. Water to these canals is given in accordance with programmes communicated to Pakistan before the commencement of each sowing season. Pakistan has objected neither to the programmes nor to the supplies actually received. It should be remembered that due to draught, water supplies this winter have been unusually short in all the rivers of the Punjab and canal waters have consequently been below normal on both sides.

Arbitration Proposal—Supply of canal water from India to Pakistan is made on the basis of the agreement concluded between the two Governments on May 4, 1948. Pakistan has been receiving water under agreement from year to year. But in December 1950, after two and a half years, Pakistan repudiated the agreement unilaterally, nevertheless India continued to supply water in terms of the agreement. In September 1951, the Government of India formally proposed to the Government of Pakistan that the question of validity of the agreement of May 4, 1948 be referred to arbitration. To this day the Government of Pakistan have not accepted the Indian proposal for arbitration.

Canal System—Pakistan's description of the devastation which will be caused should India decide to cut off her water supplies belongs more to the realm of fancy than fact. Out of the sixteen canal systems in the undivided Punjab, 12 fell entirely within Pakistan and India has no control over them; three lie wholly in India; one is common to both India and Pakistan. Of the total flow of the six rivers of the Indus system, Pakistan utilises 40 per cent, India 5 per cent, while as much as 55 per cent runs wastefully to the sea.

Pakistan is known to have completed many new large projects. Bhakra will still take four to five years to build. The Harike barrage, which cannot yet be brought into use, will have a canal of 20,000 cusecs to irrigate about 4,000,000 acres in Rajasthan out of many million acres available for development. The rest will continue to be without water.

The headway made by Pakistan, on the other hand, is quite astonishing. The Kotri barrage on the river Indus near Hyderabad is nearing completion. It is understood that the Taunsa barrage scheme near Dera Ghazi Khan and the Upper Sind Barrage, also on the Indus, have been sanctioned.

A dam and a canal are being built on the river Kurram near Bannu. Much preliminary work has also been done on the Earsack dam on the river Kabul. This is a multipurpose scheme giving irrigation as well as hydel power. In the Pakistan Punjab a new link canal has been completed since partition from the upper chenub canal near Gujranwala leading to the river Ravi which it crosses by syphon. Then, running along the border, it commands the channels, at present receiving waters from the upper Bari Doab canal, emanating in India. Another canal linking up the Ravi with the Sutlej is being built at great speed to feed the lower Sutlej valley canals.

Pakistan's construction of work bears out India's contention that alternative sources for irrigation exist Pakistan, which has little to fear when India gradually withdraws the water supply for her own use under the 1948 agreement.

Out of a total of about 44 principal canals of all kinds in the Indus basin, as many as 40 serve Pakistan and only three flow exclusively in India, while one runs partly in India and partly in Pakistan, dividing its benefits between the two countries. Out of the total available water resources of the basin, only 5% is used by India, 40% by Pakistan and the balance of 55% runs waste into the Arabian sea.

The agreement with Pakistan should make available to India fuller use of the waters flowing through the Indian territory. The need for such an agreement was recognized in the Radcliffe Award, which stated, "Where the drawing of a boundary line cannot avoid disrupting such unitary services as canal irrigation, railway and electric power transmission, a solution may be found by agreement between the States for some joint control of what has hitherto been a valuable common service."

While joint control of waters was too much too expect, a standstill agreement was reached as early as December 1947. Its operation lasted till March 31, 1948, when in the absence of a new arrangement, the supplies to the two canals serving Pakistan were discontinued. These were resumed at the end of April 1948 in anticipation of the inter-Dominion conference which recognised the right of India to withdraw the waters gradually for her own use.

While continuing to take her stand on the agreement of May 4, 1948, India concedes the need for joint development of the water sources of the Indus basin. This could be achieved in India's opinion, by agreement and not through adjudication or arbitration, for which there is no precedent.

While adjudication is unknown, there are two notable treaties which are usually drawn upon. The first, between the USA and

Canada, was signed in 1909 after negotiations spread over 10 years; the second was concluded between the USA and Mexico after 50 years of makeshift agreements. Both treaties provide for permanent international commission, composed of representatives of the countries concerned, to implement their provisions. These treaties could, perhaps, serve as models for the current negotiations between India and Pakistan.

II. KASHMIR PROBLEM

The Anglo-US Resolution—The Security Council approved on December 23, 1952, the Anglo-US Resolution on Kashmir. It was introduced on November 6 by Sir Gladwyn Jebb, the British delegate. India had earlier indicated her disapproval of the resolution but Pakistan announced on December 16 its willingness to accept it. The resolution urged on the Governments of India and Pakistan to enter into immediate negotiations under the auspices of Dr. Graham, U.N. representative in Kashmir, in order to reach an agreement on the specific number of forces to remain on each side of the cease-fire line at the end of the period of demilitarization. This number would be between 3,000 and 6,000 armed forces remaining on the Pakistan side of the cease-fire line and between 12,000 and 18,000 armed forces remaining on the Indian side of the cease fire line.

The resolution as it stood was approved by the Security Council by nine votes to one with one abstention (Russia).

Mrs. Pandit, leader of the Indian delegation, told the Council that India would not enter into any talks with Pakistan on the basis of the resolution.

On January 22, 1953, Dr. Frank Graham, UN Kashmir Mediator, held another joint meeting with the Indian and Pakistani representatives in an attempt to reach an agreed basis on which demilitarization talks between the two countries can proceed.

Dr. Graham presented to the parties a new formula for the talks. This was believed to be not based on the Security Council's resolution of December 12, 1952. India had declared she could not negotiate on the basis of that resolution as it went behind the UNCIP resolutions and ignored Dr. Graham's own recommendations.

Graham's latest report on Kashmir—Dr. Graham submitted his report to the Security Council in the last week of March 1953. The report was on the latest Geneva talks on Kashmir. Dr. Graham said that regarding the number and character of forces to be left on each side of the cease fire line, he made no preferential brief for the lower figures of 3,000 to 12,000 or the higher figures of 6,000 to 20,000.

Admitting that a substantial difference between the two Governments concerned still remains, Dr. Graham said in his report, "Instead of the UN representative continuing to report the differences to the Security Council, may the leadership of over 400 million people, with the goodwill and assistance of the UN join in negotiating and reporting an agreement on Kashmir and thereby light a torch along the difficult path of the people's pilgrimage towards peace."

The report states—"As a mediator whose responsibility has been to keep striving for an agreement, he has hoped that a basis for the negotiation of an agreement might be found." He hoped, for example, that the figures of 6,000 to 18,000 with the accompanying provision, would be found adequate for fulfilling the respective functions; in the evacuated territory of preserving law and order and a cease fire line from violations; and on the Indian side of the line of including the meeting of needs in relation to defence.

"It appears obvious that India under the resolutions has some larger responsibilities on her side of the cease-fire line than the local authorities have in the evacuated territory on the other side of cease fire line.

"Without recognition of the Azad Kashmir Government and without prejudice to the sovereignty of the State, it also appears obvious by the nature of the cease-fire line and the temporary exercise of the necessary and useful functions of the local authorities that (with the withdrawal of the tribesmen and the Pakistani nationals, not normally resident who entered the State for the purpose of fighting and with the withdrawal of the Pakistani army and the authority and the large-scale disarming and disbanding of the Azad Kashmir forces) there should be in the evacuated territory effective local authority and effective Armed Forces.

"In the Azad Kashmir territory these armed forces would be organized out of the remainder of the Azad Kashmir forces without armour or artillery and then would be commandeered by local officers under the local authorities under the surveillence of the UN.

Proposal 7 takes on much added significance because the agreement on it would prepare the way for the induction of the administrator into office at a definite time as provided in proposal 10 of the 12 proposals." The question of the armed forces was No. 7 in Dr. Grahami 12 proposals for settling the dispute.

Plebiscite Administrator—On the importance of the induction of the plebiscite administrator into office, Dr. Graham said: "It is timely that all our necessary concern over the issue of the number and character of the forces, we reorient this concern in the framework of the larger meaning of the induction into office of the plebiscite administrator provided for in Proposal 10.

Proposal 10 has been accepted by Pakistan. India's acceptance of Proposal 10 is conditioned as set forth in Annex I, paragraph 2 of the fourth report of the UN representative.

The difference over definite numbers, important as it is, looms less large than the difference between inducting and not inducting the plebiscite administrator into office. The transformation in the situation which comes from the simple fact of his induction into office is most important for the great objective of the self-determination of the people of the State under the agreements between the Governments.

The co-operation of the appropriate authorities and agencies in the State and the specified responsibilities of the plebiscite administrator all contribute to this objective. Facilitations of the induction into office of the plebiscite administrator might be recalled by reviewing the provision of the January 5, 1949 resolution.

In connexion with the importance of the number of Armed Forces to be left at the end of the period of demilitarization and the importance of the induction into office of the plebiscite administrator, we should bear in mind the importance of the later consideration of where the armed forces would be at the time of the preparation and holding of the plebiscite."

Demilitarization—Without anticipation, the specified consultations of the UN representative and the plebiscite administrator with the appropriate authorities and without prejudice to the meaning of the words 'final disposal'. Proposal 11 states: 'Agree that the completion of the programme of demilitarization referred to in the provisional clause below will be without prejudice to the functions and responsibilities of the UN representative and the plebiscite administrator with regard to the final disposal of forces as set forth in paragraph 4(a) and (b) of the January 5, 1949 resolution."

Commenting on "elucidation and assurances regarding the resolutions of August 13, 1948, and January 5, 1949", Dr. Graham said that differences between the two Governments regarding the number and character of forces, and the induction of the plebiscite administrator into office, grew out of "basic differences in the approach of the Governments of India and Pakistan to the Kashmir dispute."

He added: "These differences between the two Governments are reflected in their differing interpretations of the assurances and elucidations given by the UNCIP with respect to the resolutions of August 13, 1948 and January 5, 1949.

"In view of the remaining disagreements over the 12-point plan of demilitarization under the agreed resolutions of August 13, 1948, and January 5, 1949, the UN Representative has been at all times to receive any suggestions from the parties for the settlement of the dispute.

In his review of the Geneva negotiations, Dr. Graham said that they started with a discussion of Part 2 (truce agreement) of the August 13, 1948 resolution.

The position of both sides were summarised as follows: "India: As regards the implementation of B 1 and 2 of Part 2 of the resolution of August 13, 1948, India's position is that the Azad Kashmir forces cannot be differentiated from the Pakistani Army, of which they are, for all practical purposes, an integral part and that their numbers, equipment and efficiency constitute a threat to the security of the State."

Reduction of Troops—"So long as agreement regarding the complete disbanding and disarming of the Azad Kashmir forces is not reached, a truce agreement cannot create "the conditions for a final settlement of the situation in the State of Jammu and Kashmir."

"India is therefore unable to accept any reduction of its present forces except as part of an overall arrangement which includes not only the withdrawal of Pakistani troops, tribesmen and Pakistani nationals, not normally resident in the State but who have entered for the purpose of fighting, but also agreement on the measures to be adopted for the complete disbanding and disarming of the Azad Kashmir forces.

It will be seen that under the resolution, the withdrawal of Pakistani troops is contingent upon the withdrawal of the bulk of the Indian Army (Clause B) (1). The UNCIP had explained that synchronization of the withdrawal of the Armed Forces of the two Governments will be arranged between the respective High Commands and the Commission.

The problem thus resolved itself into one of securing India's agreement to withdraw the bulk of its forces from the State of Jammu and Kashmir as provided for in Part 2 of August 13, 1948 resolution."

The report continued: "The results of the meetings and conversations with the representatives separately on this approach led the UN Representative to the conclusion that agreement was not possible at that time between the two Governments on a truce agreement based solely on Part 2 of August 13, 1948 resolution, and it appeared to him that the same difficulties that existed as early as 1949 were still the main obstacles in the way of carrying out the commmitments embodied in Part 2.

"The UN Representative did not feel he could continue this approach as the figures of troops proposed by the Government of India for the withdrawal of the bulk of their army were not such as he could sponsor with Pakistan; nor were the figures suggested by Pakistan negotiable with India.

It was clear to the UN Representative that this approach would not lead to any fruitful result and, in accordance with the terms of reference agreed upon between the two Governments for the conference, further consideration of the 12 proposals ensued."

Dr. Graham presented to the representatives of India and Pakistan on February 14, 1953, proposals which contained *Inter alia* in paragraph 7 specific figures for the forces on each side—the same as that proposed by Dr. Graham on September 2, 1952—and 21,000 on the Indian side which was a change from the 18,000 in the September, 2, 1952, proposal.

On the force on the Pakistan side Dr. Graham's proposal said: "This force will have been separated from the administrative and operation command of the Pakistani High Command in accordance with Paragraph 9. It will have no armour or artillery." This was an addition to the previous proposal.

In addition to the change in the figure of the Indian force, Dr. Graham also added the phrase to the proposal: "This force will be armour or artillery."

The report sets out the positions of the Indian and Pakistan representatives to Dr. Graham's proposals and said that in substance, they stated the following:

"India: 1. the Government of India had no comments on paragraphs to 6-8 and the provisional clause.

2. As regards Paragraph 7, the Government of India had no comments on A(1) and B (1) and (2). On the question of Azad Kashmir forces referred to in Paragraph A(3) the Government of

India was unable to agree to the retention of any military personnel in the so-called Azad Kashmir territory.

3. In the opinion of the Government of India the function of preventing violations of the cease-fire line on the Azad Kashmir side could be effectively performed by a civil armed forced to the formation of which they had already agreed (2,000 armed, 2,000 unarmed).

However, in order to meet the UN Representative's point regarding the necessity of an adequate force to prevent infringement of the cease-fire line from the Azad Kashmir side, the Government of India was willing to agree to some increase in the numbers of the proposed civil armed force and also to the equipment of the armed section of his force with such weapons as may be considered suitable to assure the satisfactory disposal of this function.

4. As regards paragraph 9, the Government of India pointed out: (1) that the so-called Azad Kashmir Government should not be allowed to function in this area either collectively or individually through its ministers; (2) that all officials appointed by the Pakistan Government should cease to function; (3) that no connexion should be maintained between the local authority and the Pakistan Government; (4) that the administration should be conducted under the surveillance of the UN Representative by local officials who could be relied upon to discharge their duties effectively and impartially with strict regard to the needs and conditions of a fair and impartial plebiscite.

5. The Government of India's view is that the Plebiscite Administrator could properly function only after (1) the process of demilitarization is completed and the UN Representatives is satisfied that peaceful conditions have been restored, and (2) the local authorities are recognised and are functioning on the Pakistani side of the cease-fire line under the surveillance of the UN Representative.

In the interests of agreement, however, the Government of India would be prepared to agree to his induction on the last day of the period of demilitarization provided it was completed according to plan and was exhaustive, so that the Plebiscite Administrator would, as regards the forces remaining in the State after demilitarization was fully implemented, be concerned only with their disposition.

Pakistan's Views : "Pakistan :—1, Paragraph 7 of the proposals contravened the Security Council's resolution of December 32, 1952.

2. In the debate that preceded the adoption by the Security Council of its resolution of December 23, 1952, the members of the Council were at pains to affirm and explain that the break up of figures of troops proposed in the Anglo-US draft resolution on Kashmir had been arrived at after taking into account the military needs of both the Indian occupied areas of the State and Azad Kashmir.

No reasons had been advanced by the UN Representative to justify any change. The figures of troops for the Indian side of the cease-fire line have been arbitrarily raised, without any justification, to 21,000. The Pakistani delegation was convinced that if 21,000

Indian and State armed forces were allowed to remain on the Indian side of the cease-fire line as against only 6,000 Azad Kashmir forces, the security of the Azad Kashmir area would be put in serious jeopardy.

3. The figures now suggested by the UN Representative would destroy the safeguard contained in paragraph 5 of the 12 proposals (and already accepted by both sides) that "the demilitarization shall be carried out in such a way as to involve no threat to the cease-fire agreement either during or after the period of demilitarization.

4. The figures now proposed have avowedly no other object than to meet India's wishes with regard to the number of forces to be retained on its side of the cease-fire line. This fails to keep into account the corresponding needs of security on the Azad Kashmir side of the cease-fire line.

The report said: "After thorough consideration of these communications and further conversations with representatives of India and Pakistan, the UN Representative felt that there was no ground left at that stage on which to continue the conference and therefore in agreement with the two representatives, he decided to conclude it."

III. KARACHI AND CALCUTTA TALKS

In the last week of July 1953, Pandit Nehru paid a visit to Karachi to have talks with Pakistan authorities. India expected no spectacular solutions from Mr. Nehru's visit to Karachi ; none were achieved. The only concrete decision is an agreement in principle to exchange a few Bengal border enclaves which affects 24,000 people. What India did hope for was an increase in friendliness, and the warmth and spontaneity of Pandit Nehru's welcome in Karachi touched every Indian.

The Karachi meeting was only one of a series. The two Prime Ministers had already met in London and, briefly, in Kairo, and Mr. Mahomed Ali would come to Delhi in September. The Steering Committee of Officials had a whole series of meetings, and talks on evacuee property were held in Karachi.

The atmosphere had been improving for months before the meeting. Hindus of East Bengal are no longer maltreated. Migration to India has slowed to a properly visaed trickle. The February Passport Agreement, recently ratified, eases the worst hardships and at last reopens some of the land routes between India and West Pakistan; there is even talk of a train service. Moreover, the March trade agreement which removed discriminatory surcharges on coal to Pakistan and jute to India has turned a *casus belli* into a customs return.

Pakistan was then still under Khwaja Nazimuddin; it was he who first made a suggestion for a meeting. Mr. Mahomed Ali's contribution was to put enthusiasm and feeling into the stiffness of his predecessor's gestures: he talked of Mr. Nehru as his "elder brother"; he clamped down on mullahs; those in authority at last stopped threatening India with Jehad—the air cleared over-night. Even last spring's ripple over canal waters caused no spills.

This friendliness, however, does not blur into wishful thinking.

Most of the eighty odd issues between the two countries are minor enough to be settled by give and take, and of the major ones, the World Bank Mission may in due course solve the canal waters problem which was not discussed at Karachi. But Kashmir and evacuee property involve tenaciously-held principles on both sides. No Indian can accept Pakistan's view that evacuee property should be dealt with by private sales by the evacuees; no Hindu or Sikh feels that he could go in safety to West Pakistan to dispose of his own. Pakistan finds it equally difficult to accept the Indian theory that it should pay the £500 million or so difference in the value of evacuee property in the two countries. The problem of Kashmir are as familiar as they are old, but they were recently complicated for India by the determination of Jammu, expressed in riots and strikes, to become completely part of India and the blunt insistence by Sheik Abdullah that antonomy of Kashmir Valley must remain absolute independence.

Indo-Pakistani talks were also held simultaneously in Calcutta over some other outstanding matters. The sub-committee appointed by the Indo-Pakistani Conference in Calcutta, to consider the exchange of enclaves and demarcation of boundaries between East Bengal and the neighbouring Indian States made substantial progress in its work. It is understood that settlement was reached of the boundary dispute between the two Bengals concerning certain portoins of the 'Berubari village in Jalpaiguri. An area of six square miles will come to West Bengal as a result of this understanding.

It was also settled that the course of the Mathabhanga river indicated in the Bagge Award should be regarded as the permanently fixed boundary of West Bengal at the eastern junction of Murshidabad and Nadia. An area of about ten square miles, which was claimed by Pakistan should now belong to West Bengal.

The total area, covered by the disputes, is 16 square feet, which is now occupied by East Pakistan. As a result of the agreement at the conference, this should come to West Bengal.

IV. DELHI TALKS IN AUGUST

At the Delhi talks the Prime Ministers of India and Pakistan have decided that a Plebiscite Administrator for Kashmir be appointed by the end of April, 1954. The decision to appoint the Administrator by the end of April 1954 is in pursuance of the Prime Ministers' desire to "fix some kind of a provisional time-table" for the plebiscite. The following is the text of the communique:—

The Kashmir dispute was especially discussed at some length. It was their firm opinion that this should be settled in accordance with the wishes of the people of that State, with a view to promoting their well-being and causing the least disturbance to the life of the people of the State. The most feasible method of ascertaining the wishes of the people was by fair and impartial plebiscite. Such a plebiscite had been proposed and agreed to some years ago. Progress, however, could not be made because of lack of agreement in regard to certain preliminary issues. The Prime Ministers agree that their preliminary issues should be considered by them directly in order to arrive at agreements in regard to them. These agreements would have to be given effect to and the next step would be the appointment of the Plebiscite Administrator.

In order to fix some kind of provisional time table, it was decided that the Plebiscite Administrator should be appointed by the end of April, 1954. Previous to that date, the preliminary issues referred to above should be decided and action in implementation thereof should be taken. With this purpose in view, committees of military and other experts should be appointed to advise the Prime Ministers. On the Plebiscite Administrator's formal appointment and induction into office by the Jammu and Kashmir Government, he will examine the situation and report upon it. He will then make such proposals as he thinks proper for preparations to be made for the holding of a fair and impartial plebiscite in the entire State, and take such other steps as may be considered necessary therefor.

The Prime Ministers considered the evacuee property issue and were glad to find that, as a result of discussions between the representatives of the two Governments at Karachi, considerable progress had been made. Certain data were now being collected to enable final decisions to be taken. It was hoped that a meeting of the representatives of the two Governments would be held within a month for a further consideration of these problems.

At their meeting in Karachi the Prime Ministers had agreed that the Cooch Behar enclaves in East Bengal should be exchanged with East Bengal enclaves in Cooch Behar. It was accordingly decided that a conference should be held in Calcutta as soon as possible to work out the necessary details. The conference should also consider travel and trade facilities and other issues, especially relating to East Pakistan, West Bengal and Assam. This conference should be attended by the representatives of East Pakistan, West Bengal and Assam and the two Central Governments.

V. EVACUEE PROPERTY

In April, 1954 the Government of India in its communictaion suggested that the problem of the settlement of rural evacuee property could no longer be delayed. India had suggested to Pakistan that the two Governments should take over evacuee properties and compensate the evacuee owners. For that purpose evacuee property on both sides had to be evaluated either by a joint commission of the two countries or by an impartial body. The Government of India would also be prepared to refer the question of the method of evaluation to arbitration by an impartial tribunal. The matter might be referred to the International Court or to an ad hoc court consisting of the nominees of the two Governments.

The Pakistan Government in its reply to India's proposal for the settlement of the evacuee property dispute has refused to agree to the method suggested by India. The Pakistan Government, had indicated that it was willing to submit to arbitration, provided all other major issues between the two countries were settled simultaneously on the same basis. It had characterized the Indian proposal as a violation of the existing agreement of January 1949, amounting to expropriation of evacuee property.

In the second week of August, talks were held in Karachi between the two countries over the evacuee property issue. A communique issued on 13 August from Karachi said that the problems of urban and agricultural evacuee properties was discussed but no decision was arrived at.

Regarding movable properties, agreement was reached on various matters. Agreement was reached on various matters like refund of cash security deposits of contractors without imposition of penalties for non-fulfilment of contracts due to migration, removal or disposal by evacuees of their personal and household effects, appointment within one month of a joint committee for assessment of compensation where it has not already been determined for movable property allotted or acquired for rehabilitation purposes, restoration of seized articles including fire-arms, exchange of lists of sale-proceeds to diplomatic representatives of the two Governments within two months. The procedure for recovery of buried treasure has been approved by the two countries.

It has also been agreed that appointment of liasion officers should be expedited so as to enable the actual work of exchange of postal parcels to start by September 1, 1953. With regard to postal parcels it was agreed that they should be released to officers nominated by the two Governments for internal distribution without any customs restriction.

It was contemplated under movable property agreement that legislation should be undertaken by both Governments to facilitate transfer of court deposits of minors and those under the guardianship of courts and deposits of wards under the Court of Wards Act from one country to other. A draft legislation was discussed and approved.

Questions relating to bulk transfer of lockers, restoration of properties of joint stock companies and payment of compensation where such properties have been acquired by the Government, release of shares, securities, debentures and insurance policies held in banks were examined and discussions will be resumed in the near future.

No decision was reached regarding urban and rural agricultural evacuee properties. It was however agreed that the exchange of revenue records between the two countries should be expedited.

In regard to the question of treatment of pensionable service of displaced government servants of undivided provinces rendered by them before migration, no decision was taken.

Discussions were also held regarding maintenance, care and protection of places of worship, specially of historial importance, facilities for sewardars and khadam, visits of pilgrims to those places and management and utilization of property attached to them with the Ministry of the Interior and the Ministry of Refugees and Rehabilitation. There was general agreement that the two Governments should take necessary steps in this behalf. It was felt that the question of the management of properties attached to places of worship may be taken up separately from the general question of trust properties in order to expedite a decision thereon. The question of other trusts and trust properties was also discussed and it was agreed that the Trust Property Committee should be revived to go into various issues involved and submit its report within three months.

On 24th November India requested Pakistan by telegram to begin implementation of the recent agreement on movable property from December 1, 1953. To make implementation possible without further delay, India has also conveyed its acceptance of certain modifications to the agreement which the Pakistan Government had suggested. The agreement on movable property was negotiated at Karachi in July and August. It was decided to resume talks on evacuee property in the Indian capital. No reply has so far been received to the Indian Government's suggestion that a meeting be held to discuss a definite date for the resumption of talks.

WORLD AFFAIRS

The international political scene was on the calmer side during 1953, with occasional outbursts by Powers at each other. The centre of interest during this period has shifted from Iran to the Suez and Pakistan. The Korean events have become dull and stalemate. Some important world events are being described below.

1. SUEZ AND THE MIDDLE EAST DEFENCE

Of all the great roadways of the world, the sea road to India via the Isthmus of Suez is probably the most important, for it joins East and West, Asia and Europe. The Isthmus itself, by virtue of its geographical position, has always been a focal point, but its greatest significance dates from the opening of the Canal, in 1869, at a time when Europe was triumphantly expanding, thanks to the industrial revolution and steam navigation. The rapid pace of industrialization could not have been kept up without access to raw materials from the uttermost parts of the earth and the opening of new markets for manufactured goods. And the introduction of America to the Far East in the twentieth century further enlarged the role of this intercontinental route. If the canal is blocked or its efficiency impaired the whole Western World is affected.

As an intercontinental crossroad, Suez is so important that the great World Powers must, of necessity, either establish a foothold in it or at least make sure of its availability to them.

In ancient Roman eyes, Asia was a fabulous source of riches and luxury. After Alexander the Great had swept away many of the dividing walls which separated one part of the Orient from another, trade on a truly international scale developed between three important centres of civilization: the Mediterranean, the Hellenistic Middle East and the Far East proper (India and China).

In the second-half of the fifteenth century, two events of capital importance transformed the face of the globe. First, the Turkish capture of Constantinople (1453) cut off the ancient routes to Asia. And, second, Vasco da Gama (1498) opened a new sea route around the Cape of Good Hood Hope, to India. As a result, the Mediterranean was changed, for three centuries to come, from a passageway into a blind alley. The world centre of gravity was displaced toward the shores of the Atlantic and the Great Powers which bordered upon it.

At that time, the Cape of Good Hope was a sufficient and preferable route. It was suited to sailing vessels and offered more security than the pirate-infested Mediterranean. But the relationship between Europe and Asia was radically changed when the Industrial revolution came into full force and steam navigation swept the sailing ships from the seas. Industrialized nineteenth century Europe was no longer content with Eastern spices and luxury products; it needed raw materials for its factories, and foodstuffs in wholesale quantities for an expanding population.

Now the Orient appeared in quite a different light, not as the legendary and marvellous region of the past but as a no less precious reservoir of cheap raw materials, and at the same time, a market for the West's increasing industrial production. A whole new system of exchanges came into being: Europe imported goods in the raw and sent them back manufactured. This was a healthy and mutually beneficial state of affairs, which made for nineteenth century prosperity and all the benefits of free trade.

Another result, felt from the end of the eighteenth century to the first world war, was the indisputable and uncontested power of the European nations, based on their industrial monopoly. This power was incorporated in a worldwide system, to all practical purposes under British control.

Toward the middle of the nineteenth century, when the passage from England to India *via* the Cape of Good Hope required 140 days by sail and 90 days by steam, a direct sea route between Europe and India became increasingly necessary. The canal was to reduce the time of a journey to India by almost one-half, and of a voyage to the Far East by almost one-quarter. The final factor needed to make an all water route through a canal practical was the more complete development of steam navigation, for sailing vessels could not have coped with the windless waters of the Red Sea.

In 1854 the French engineer Lesseps obtained permission to construct the Canal from Mohammed Said, Viceroy of Egypt. The economic ideology of the period tended toward large-scale international exchanges, and it was thought that lower tariffs and the elimination of customs formalities would soon be the rule. Free enterprise was in style, and everywhere it gave continuous proofs of the unlimited possibilities of capital, credit and competition. Lesseps was able to count on financing his project through a private company, to which savings from all over the world would contribute. There was widespread respect for international law then, and it was natural that the Canal should not be looked upon as the property of any single Power, but as an undertaking shared by all mankind.

Ferdinand de Lesseps found himself in contact with an Egypt modernized by Mohammed Ali. Lesseps was on even closer terms with Mohammed Said, his successor. No doubt Mohammed Said and Ismail after him, preferred the "Canal to belong to Egypt rather than Egypt to the Canal," but they maintained a strictly neutral attitude towards the Company charged with constructing it—that is, they preferred no nationalistic arguments to interfere with the work of the engineers or the administrators.

Lesseps and Mohammed Said had no trouble in reaching agreement upon the fundamental idea of the enterprise. Its essential features, just as they exist to-day, are written into the original concession, signed on November 30, 1854. The concession was a personal arrangement with "our friend, M. Ferdinand de Lesseps", to whom was given full power to set up and direct a "universal" company for the piercing of the Isthmus and the exploitation of a canal between the two seas. The adjective "universal" as applied to the Company, shows how free of any national bias it was intended to be. Rates were to be the same for all countries, with no chance for any one of them to obtain a special favour. The concession was made for a period 99 years from the opening of the canal. This means that it will terminate in 1968, when the Egyptian Government is to replace the Company, paying a sum to be fixed by arbitration.

Lesseps' real difficulties were neither technical nor financial but political. In spite of the solemn declaration of the founders that the undertaking was international in character, Britain was profoundly mistrustful and feared that France was trying to obtain a monopoly of communications between Europe and Asia. In spite of the fact that Lesseps sought to raise his capital of 200 million francs by public subscription, English hostility, instigated by Lord Palmerston, continued to the very end. The principles of availability to all and complete neutrality were not enough to suit the British Prime Minister, and Lesseps' attempt to obtain an international guarantee of neutrality was unsuccessful. Evidently England would be content with nothing less than a privileged position, asserted by reason of the fact that English traffic would be Canal's mainstay.

In the period 1870-80, 76 per cent of the total tonnage was under the English flag, and France which came next, had only 8.3 per cent. while the United States, which had supplied up to 10 per cent of the traffic going around the Cape, was insignificantly represented.

Having been outstripped by France in the creation of the Canal, England proceeded to make up for lost time, first by buying out the 177,000 shares held by the Khedive Ismail, and thus entering the Company's administration; and, second, by effecting a military occupation of Egypt in 1882, which gave her effective rule over the country, the Isthmus included. As a result, the neutrality of the Canal took on a peculiar character which to some extent still prevails.

Contrary to general belief, the purchase of Ismail's shares did not give England control of the Company, which had 400,000 shares outstanding; but with Lesseps' consent she achieved minority representation on the Board of Directors. The British occupation of Egypt seriously modified the Company's position, however, since the

Khedive no longer held the reins. Temporarily at least, Britain accepted a status of neutrality, but at the same time she intended to take advantage of the privileges gained by military occupation. Under these circumstances, France all the more strongly desired an international covenant of some kind, and one was eventually adopted, under the name of the 1888 or "Constantinople" Convention.

The principles set forth were largely, but not entirely, based on a presupposition of neutrality, or to be more exact, of "free use". The Canal was to be kept open, in war as in peace, to warships and traders alike; no fortifications were to be built and no blockades allowed. The Khedive's Government, with, if necessary, the support of the Ottoman Government, to which it owed allegiance, was to insure the observance of these rulings. The validity of the Convention was not limited to the duration of the concession, but was indefinite. Obviously, by virtue of the military occupation England was the actual guarantor, as the signatory to the Convention saw quite clearly.

This system functioned until 1920 and the application of the Versailles Treaty. During all the period, it was England's chief interest to keep the waterway to India open. But as a trading Power, England was equally concerned with the free and regular movement of communications among the continents. During the Franco-Prussian war of 1870, the freedom of the Canal was respected even by the belligerents, as it was during the Italo-Turkish war of 1911. This was a truly notable occurence, and from it we can judge the respect accorded to international agreements in those days. In this regard the twentieth century has fallen far behind its predecessor.

But in more recent times the problems of a waterway to India *via* the Mediterranean have changed their complexion. Middle-Eastern oil is a new and important factor in trade, while such modern weapons as the airplane and submarine have endowed war—whether hot or cold—with a degree of insecurity unknown in the past. The Cape route suddenly seems less vulnerable and has regained something of its former favour.

Since the second world war, the political map of Asia has greatly altered. An independent India has slipped out of England's hands, while Communist China has abandoned the West entirely. In the days of European, or rather British, hegemony, India's tariff policy was determined in London and that of China through the International Customs Union. During the nineteenth century, the world was a sort of international mercantile republic, with Britain at its head, in which business affairs were incontestably controlled by white men of European strain. An efficient administrative machine functioned and guaranteed the stability and security of exchanges between the continents. Now the whole atmosphere has changed and every problem has to be examined from a different angle.

Since 1913 the tonnage carried through the Suez Canal has grown to an extraordinary degree: from 24,678,000 tons in the last pre-war to 83,448,000 in 1952. And its make-up is quite different from what it used to be. In 1913, traffic from north to south came to 11,320,000 tons, or 44 per cent of the total; in 1952, it was

22,001,000 tons, or only 26 per cent, whereas traffic from south to north has increased from 14,455,000 in 1913 to 83,448,000 tons in 1952. The character of north-to-south traffic has not changed for it is still composed of manufactured or semi-manufactured goods whereas traffic from south to north which has considerably increased in volume, still consists mainly of raw materials, with the process of change in the tonnage of goods; oil is made up 83 per cent of the raw materials and 74 per cent of the total. The increase in oil is, of course, a result of the sensational development of the Middle-Eastern oil fields (in which the loss of Abadan passes practically unnoticed). It is now a fact that oil is the main commodity in south-to-north trade. In view of the decisive role played by oil products in both peace and war today, the freedom and security of communications through the Canal is becoming and more important for Europe and for the United States as well.

The largest part of the tonnage is under the British flag—33.3 per cent of the total in 1952. Even so this represents a great falling-off from the figures of 51.4 per cent in 1939 and 76.1 per cent between 1870-80. England still uses the Canal a great deal more than any other nation, and is therefore the Power most directly interested, from both a political and a commercial point of view, in its efficient functioning. Until 1939, hardly any traffic went under the American flag (0.15 per cent of the total). The second world war brought a considerable increase, however, and in 1952, 7.3 per cent of the tonnage travelled under the American flags, American imports through the Canal were 6,156,000 tons in 1952—largely oil and manganese; exports (amounting to 4,079,000 tons) were mostly grain (on the way to famine-stricken India) and petroleum products. The United States is present now in the Near East with an accumulation of economic and political interests. As a result, no problem concerned with the Suez Canal can be solved without American co-operation.

There are two sides to the military problem of the waterway to India; the question of the defence of the Canal, and of the maintenance of the free passage through the other seas and straits along the route. The whole situation has radically changed since the First World War. Although England still has nominal control of the Isthmus and the road to India, her position is precarious, and the whole system calls for revision.

The Constantinople Convention still stands, or rather, the principles which it implies hold good; but it has undergone important modifications. According to the text of 1888, the Ottoman Government, which then held sovereignty over Egypt, was supposed to enforce the Convention, but England, by virtue of military occupation, was in actual control and has been ever since, under a different title. Article 152 of the Versailles Treaty transferred to England the powers given to the Sultan by the Convention. And it is on the basis of an Anglo-Egyptian treaty of 1936 that England occupies the Isthmus. After passing in 1914 from the status of a vassal to Turkey to that of a British protectorate, Egypt in 1922 acquired self-government and has been intolerant of foreign military occupation ever since. In October 1951, Egypt abrogated the 1936 Treaty, but England still occupies the Isthmus and will not consent to withdraw until the present makeshift arrangement is superseded by a stable agreement guaranteeing the safety of a route which is indispensable to her status as a World Power. And it must be admitted that British control has served the other users of the Canal well; thanks to the tradition of fair play, there has never been any discrimination.

If it seems impossible, as things now stand, for the British will to prevail, it is because Egypt's insistence upon complete independence is buttressed by a surge of anti-Western feeling among all the Arab states. The importance of the area where the Canal is located is more crucial than ever. There are trouble spots all around, and its security is vital not only to England but to the whole western world, the United States included.

The two world wars have taught England that the hostility or even the hostile neutrality of a single one of the Mediterranean Powers can endanger the safety of the Canal. Any enemy that has a foothold on this narrow, winding body of water, can close it; indeed, to this end, control of the military installations (which England has never lost) is not necessary. The enemy can exercise a veto right, at least upon commercial traffic, and make passage impossible without an armed raid or a minor naval battle. Twice, in the course of the last wars, England has revived Vasco da Gama's abandoned route around the Cape of Good Hope. It is longer and more expensive, but safer, at least comparatively from attack by airplanes and submarines.

However, even in time of war the Suez route must be kept passable for warships at least, if not for mercantilism. And the Isthmus cannot be considered merely a passageway; it is an advanced position in the defence of East Africa, West Asia and the Indian Ocean. The question is no longer one merely of the Canal, but of a strategic military base on the Isthmus where arms and armies can be concentrated. It serves the function of a hinge rather than a passageway. Neither Britain nor the United States can possibly withdraw from the Isthmus, any more than they can withdraw from the Mediterranean basin. But the nature of its defence must be changed to fit the political developments in Egypt, and also to fit the new techniques of war. For instance, the Isthmus might be protected, even without occupation, from a string of surrounding points: Cypros, Cyrenaica and Kenya. It might be possible to set up an inter-Allied defence group, with Egypt as one of the partners.

In the time of Lesseps and indeed up to the Second World War, the completely free movement of traffic through the canal was never questioned. The first article of the Convention of 1888 establised "free use of the canal in time of war as in time of peace," and the Company assured it. But since the recent war in Palestine, the Egyptian Government has claimed a right to stop tankers on their way to Israel. This is a violation both of the original 1854 concession and the convention of Constantinople, which is still valid; but protests by the other Powers have not caused the Egyptians to desist from their abuse of the Convention. They justify their action by Article 10 of the 1888 Convention, which states that other provisions of the Treaty "shall in no case occasion any obstacle to the measures which the Imperial Ottoman (read Egyptian) Government may think it necessary to take in order to ensure by its own forces the defence of its other possessions situated on the eastern coast of the Red Sea." It was under the pretext of self-defence and the preservation of law and order that the Egyptian declarations of May 15 and 18, 1948, introduced the inspection of ships in Egyptian ports and the confiscation of goods destined to an enemy. According to Article 11, the measures provided for in Article 10 "are not to prevent free use of the Canal". To which the Egyptians may in turn reply that they respect the idea of "free use" and that they object, not to the passage of ships but to cargoes containing contraband goods sent to a hostile Power. Neither the Ottoman Government, in the course of the Italo-Turkish war, nor the Allies in 1914 and 1940, had recourse to any such arguments in order to twist to their advantage the text of an agreement truly international in spirit.

II. DEVELOPMENTS IN EGYPT

On June 18, 1953, General Neguib proclaimed Egypt a Republic, with himself as President and Prime Minister. This development prepared by stages since King Farouk was forced to quit the country and abdicate in favour of his infant son, Fuad, comes just under a year after General Neguib's seizure of power.

All Royal titles have been abolished. At a Press Conference at Egyptian Army headquarters on 18th June, Major Salah Alam said: "We proclaim the abolition of the monarchy and the end of the Mohammed Aly dynasty.

"We proclaim a Republic with General Neguib as President. He will retain all his powers under the provisional constitution during the transition period. But we would like to make it quite clear that the last word regarding Republican rule—whether a presidential or parliamentary system—shall be subject to a popular referendum after the completion of the drafting of a new constitution and the return to parliamentary life. The people will also have the right to elect a President of the Republic. The present appointment of General Neguib as President is natural because he is the leader of the revolution.

Egypt demands the complete evacuation of British forces from the Canal Zone. Britain on the other hand states that she may withdraw provided Egypt agrees to join the Middle East Defence Organization.

Negotiations have been going on, with periodic break, between Britain and Egypt over the Canal Zone issue. But no agreement has as yet been reached. Earlier, the USA offered to take part in the negotiations, but Egypt rejected the idea of tripartite talks.

III. SUDAN, EGYPT AND UNITED KINGDOM

On February 12, 1953, Britain and Egypt signed an agreement giving self-government to the Sudan which they have ruled jointly for the past 53 years. The pact provides that within three years the Sudanese will choose whether they want independence or some form of link with Egypt, their powerful northern neighbour. It was signed by General Neguib and Sir Ralph Stevenson, British Ambassador, after long drawn-out negotiations.

During the transition period the eight million people of this rich cotton-growing land will govern themselves, but foreign affairs and defence will be under the direction of a Governor-General.

Egyptian conditions that no special powers must be retained by the Governor-General Sir Robert Howe for the so-called "backward south" and that British and Egyptian troops must be withdrawn before self-determination, are both met in the agreement.

Main points of agreement are—(*a*) Early election for an all Sudanese Parliament, (*b*) establishment of three mixed commissions to work with the Governor-General, (*c*) during transition period Governor-General will be the supreme constitutional authority within Sudan, (*d*) Transition period will end by a resolution of the Sudanese Parliament, (*e*) Sudanese Government and Parliament will pass on law providing a Constituent Assembly. Detailed arrangement for Sudan's choice for its future will be subject of international supervision.

POLITICS AND ELECTION IN SUDAN : The election commission for the Sudan was duly constituted with an Indian, Mr. Sukumar Sen, as Chairman.

The National Unionist Party which stands for union with Egypt has won the Sudan elections. Latest results available showed they already had 51 seats in the 97-member House of Representatives, giving them a majority over all other parties.

The election was mainly a fight between the National Unionist Party, led by Sayed Sir Ali el Mirghani, and the Ummar Party which stands for complete independence, led by Sayed Sir Abdel Rahman el Mahdi.

The issue ultimately at stake in the election is some form of union with Egypt, or complete independence. The agreement reached on February 12, 1953, between Britain and Egypt, who since 1899 have jointly ruled the Sudan, provided for elections and for a new constitution.

The new Parliament will not, under the Anglo-Egyptian Agreement of February 12, take any immediate steps about the Sudan's future. With the Sudanese elections ending in victory for the pro-Egyptian Sudanese National Unionist Party, an early resumption of Anglo-Egyptian talks for a settlement of the future of the Suez Canal Base is visualised.

IV. KOREAN AFFAIRS

A REVIEW : On June 25, 1950, Communist-dominated North Korean army crossed 38th Parallel to invade South Korea. Security Council asked all UN member nations to support South Korea. On July 1, Americans landed in Korea. On July 7, UN forces were placed under command of General Douglas MacArthur. On August 1, North Koreans reached point further south within 40 miles of south eastern point of Pusan. On September 15, UN forces landed at Inchon on west coast from an armada of 262 ships. Offensive started which took UN army nearly to Manchurian border. On 3rd November, British 29th Brigade arrived at Pusan. On November 24, General MacArthur ordered new offensive to end the Korean war. On November 26, 200,000 Chinese troops entered war on North Korean side, crossed Manchurian frontier and started moves which forced UN army back to 38th parallel.

On April 11, 1951, General MacArthur was relieved of all commands and was succeeded by General Ridgway. On June 23, M. Malik, Soviet Representative to UNO proposed a conference of the belligerents to discuss armistice. On July 10, cease-fire talks started at Kaesong. On August 23, Communists suspended peace-talks. On October 22, agreement was reached for resuming cease-fire talks.

On February 18, 1952, there was rioting on prisoner of war in Koje Island. Other cases of rioting at POW camps followed. On March 4, Soviet Russia charged the USA with using germ warfare. On October 21, there was breakdown of truce talks on prisoner of war issue. On December 1, Indian peace proposals were presented to the UN Political Committee. President Eisenhower visited Korea, on December 2.

On April 11, 1953, agreement for exchange of sick and wounded prisoners were signed at Panmunjon. On April 26, plenary armistice talks were restarted. On July 26, final agreement on armistice was reached at Panmunjon. On August 5, exchange of prisoners of war began. On 9th August, Indian Custodian forces reached Korea.

NEGOTIATIONS AT PANMUNJON: By the summer of 1951 both the United Nations and Communists could see that there was no prospect of quick or cheap victory in Korea for either side, and neither wanted to be responsible for keeping the war going. The front line then, and since, was near the 38th parallel which was a convenient place for it to be. And whether or not either side then wanted a truce, they certainly needed some place from which they could publish to the world their case in the Korean affair.

Panmunjon has kept this dual purpose of meeting ground and platform for the past two years—serving mainly as the latter, except when there was something practical to be done, such as arranging the exchange of sick and wounded prisoner in the spring of 1953. For most of these years neither side was anywhere near defeat or in need of peace: and this remained so until President Eisenhower was helped to victory by his promise to wind up the war, and the Communists for their part seemed to decide that a truce would give impetus to their new diplomatic offensive. The meeting place was first Kaesong, then Panmunjon. Panmunjon lies south of the 38th parallel—and so technically in South Korea—and at the same time is in Communist territory.

ARMISTICE SIGNED

On July 27, 1953, fighting in Korea ended with the cease-fire at 10 P.M. local with the signing of armistice at Panmunjon—three years and 33 days after the start of a war which has devastated the peninsula and cost over 2,300,000 casualties on both sides.

The two chief negotiators, Lieutenant-General Harrison for the UN and General Nam II for the Communists, signed the agreement in a yellow T-shaped "peace pagoda" specially built in North Korean style for the ceremony. Within 72 hours of the signature, troops withdrew two kilometres (one and a quarter miles) on each side of the 152-mile front.

The preamble to the 12,000-word agreement said the UN and Communist Military Commands "in the interests of stopping the Korean conflict with its great toll of suffering and bloodshed on both sides, and with the objectives of establishing an armistice, which will ensure a complete cessation of hostilities and of all acts or armed force in Korea until a final peaceful settlement is achieved, do individually, collectively and mutually, agree to accept and to be bound and governed by the conditions and terms of the armistice.

The preamble specified that the armistice conditions and terms were intended to be "purely military in character and to pertain solely to the belligerents in Korea."

The agreement provided amongst for others:—

(1) The exchange of all prisoners of war willing to be repatriated and no interference with the return of displaced civilians to their homes in North or South Korea.

(2) The safe despatch to demilitarized zones of prisoners unwilling to be repatriated. Here they would be placed in the custody of Indian troops.

(3) A joint military armistice commission to enforce the truce.

(4) A Neutral Nations Supervisory Commission, with representatives from Sweden, Switzerland, Poland and Czechoslovakia to supervise and inspect truce arrangements and report violations to the joint Military Armistice Commission.

The opposing Commanders agreed to recommend that their Governments should hold a higher level political conference within 90 days of the signing of the truce to settle through negotiations the questions of withdrawal of all foreign troops from Korea and the peaceful settlement of Korean question etc.

The Agreement applied to all Army, Naval and Air Force personnel of the Communist and UN Commands. A separate agreement signed on June 8, dealing with the fate of prisoners unwilling to be repatriated, was released by the State Department with the text of the Truce Agreement. It set up a *Neutral Nations Repatriation Commission* composed of Sweden, Switzerland, Poland, Czechoslovakia and India, to whom the unwilling prisoners would be turned over.

Both sides would allow 90 days to persuade the prisoners to accept repatriation. But if this persuation failed, the question of the disposition of these prisoners would be submitted to the Political Conference. If the Political Conference reached no decision within 30 days they would be given civilian status and released. Prisoners who chose to go to neutral nations would be assisted to do so by the Repatriation Commission and the Red Cross Society of India.

RETURN OF PRISONERS : The provisions for the return of prisoners accepting repatriation were:

"Within 60 days after this Armistice Agreement becomes effective, each side shall, without offering any hindrance, directly repatriate and hand over in groups all those prisoners of war in its custody who insist on repatriation to the side to which they belonged at the time of capture. . . .

"Each side shall release all those prisoners of war, who are not directly repatriated, from its military control and from its custody and hand them over to the Neutral Nations Repatriation Commission for disposition."

This repatriation was to be completed within 60 days of the armistice signing.

The Military Armistice Commission established under the Truce Agreement would be composed of five senior officers of the UN Command and five of the North Korean and Chinese Commands. Six of the ten-man commission would have the rank of General or Admiral.

Their general mission was specified as "to supervise the implementation of this Armistice Agreement and to settle through negotiations any violations."

The Commission would have its headquarters at Panmunjon. It would be authorised to despatch joint observer teams to invsetigate any reports of truce violations and to ask the Neutral Nations Supervisory Commission, to conduct special inspections outside the demilitarised zone where violations had been reported.

The Military Commission may make recommendations to the Commanders of the opposing sides, on amendments or additions to the Armistice Agreement, which would be designed to ensure a more effective armistice.

SUPERVISORY COMMISSION : The section of the Agreement concerning the functions and authority of the Supervisory Commission and the inspection teams shall be such as to enable them to properly insure that reinforcing combat aircraft, armoured vehicles, weapons, and ammunitions are not being introduced in Korea ; but this shall not be construed as authorising inspections or examinations of any secret designs or characteristics of any combat aircraft, armoured vehicles, weapon or ammunition."

The American State Department text described the Agreement as one between the UN Commander-in-Chief, the Supreme Commander of the Korean People's Army and the Commander of the "Chinese People's Volunteers."

EXCHANGE OF PRISONERS : Promptly at one minute past midnight G.M.T. on August 5, 1953, the exchange of prisoners of war began. On September 6, the last Allied prisoner crossed into freedom as "Operation Big Switch" ended at Panmunjon today. "Operation Little Switch" was the earlier exchange of sick and wounded prisoners.

The Communists have returned 12,760 to the Allies and received in exchange 75,799 of their own men from Allied hands. The returned Communists were 70,159 North Koreans and 5,640 Chinese.

The 12,760 UN prisoners returned were made up of: American 3,598; Australian 21; Belgian 1; British 946; Canadian 30; Colombian 22; Dutch 2; Filipino 40; French 12; Greek 2; Japanese 1; New Zealander 1; South African 8; South Korean 7,848; Turkish 223.

The Indian Custodian force in Korea started receiving from September 10 prisoners of war from both sides who do not want to be repatriated in the demilitarized zone. About 23,000 North Korean and Chinese were received from the UN side, while the Korean People's Army and the Chinese People's Volunteers handed over 400 UN personnel, including 5 hospital cases.

The Chairman of the Neutral Nations Repatriation Commission, was Lt.-Gen. K. S. Thmayya.

REPATRIATION COMMISSION AND UN COMMAND DISAGREE : In the absence of agreement within the Neutral Nations Repatriation Commission on the rules governing the interrogation of prisoners who do not wish to be repatriated, there was no certainty of starting the interrogation. Meanwhile a serious dispute has arised between the Commission and the UN Command on the method of approach to prisoners.

KOREAN PEACE CONFERENCE : Although armistice was signed in Korea, peace was not yet concluded. The main hurdle in convening the Political Conference on Korea was the difference between the USA and the Communists over the composition of the Conference. While the USA was demanding that only the belligerents should participate in the Conference, China was demanding the inclusion of Soviet Russia, India, Indonesia, Pakistan and Burma.

On 26th August Mr. John Foster Dulles, United States Secretary of State, held out the possibility that India's participation in the later stages of the post-Korean war peace talks might not be unacceptable to the USA. On August, 27, the UN Political Committee voted by 27 to 21 with 11 abstentions, for India's participation in the Korean peace conference. The margin in favour of India's participation, if maintained in the General Assembly later, would not be enough for a two-thirds majortiy.

The Committee approved Soviet participation in the conference "provided the other side desires it." The vote on Soviet participation was 55 to two, with two abstentions. It rejected the Soviet proposal for a 15-nation conference.

The main Allied resolution setting up the Korean peace conference was approved in full by the Political Committee by 42 to five, with 12 abstentions. The Committee approved the main Allied proposal that all countries with troops in Korea could participate in the conference, that the participating Governments act independently and would be bound only by decisions to agreements to which they adhered. The vote on this provision in the Allied proposal was 42 to seven, with 10 abstentions. The USA and Britain voted on the opposite side of India's participation.

But India's name was withdrawn from the General Assembly meeting on 28th August, 1953. Mr. V. K. Krishna Menon in withdrawing India from consideration as a participant in a Korean peace conference said in the General Assembly that in reaching his decision there had been "no argument, no deal and no trade of anything of that kind." It may be remembered that the USA was against India's participation in the peace conference. The moderating decision of the Indian Mission not to press for a vote in the Assembly on 29th August was in view of the evident fact that the two-thirds majority required in the plenary session was denied by the muster of Latin American votes behind the objections of the USA—and this method of defeating the Assembly's wishes speaks sufficiently for itself.

On September 13, Mr. Chou En-lai, China's Prime Minister, called for the inclusion of Soviet Russia, India, Indonesia, Pakistan and Burma with the belligerent nations at the Korean Political Conference. In a cable to Dr. Hammarskjoeld, UN Secretary-General, Mr. Chou also demanded that Communist China and North Korea be invited to send their representatives to the General Assembly to discuss membership of the Political Conference.

Dr. Hammarskjoeld formally notified Communist China and North Korea in August of the General Assembly's recommendations that all 16 nations which sent troops to Korea should be eligible to take part in the Conference and that Russia should also be present "provided the other side desires it."

The Assembly also asked the USA to arrange with the Communist side for the Political Conference to be held not later than October 28.

The issue of holding the Political Conference still remain undecided. The USA insists that the place of the Conference should be settled first, while China insists that the question of composition should be settled first. In the circumstances deadlock continues.

On December 7, the Chinese Prime Minister, Mr. Chou En-lai sent a message to the UN General Assembly that the situation in Korea had now reached a critical stage. A seven point letter had been sent to the UN Secretary-General and the President of the UN General Assembly. The letter said explanations to unrepatriated war prisoners by the Korean and Chinese sides were carried out for only seven days. Twenty days had elapsed since the explanations were forced to come to a halt for the fifth time. There had been no resumptions.

Therefore the agreement on repatriation of war prisoners in the Korean Armistice Agreement had already been seriously violated. At the same time the Panmunjon discussions between the two signatory sides to the Korean armistice on the question of a political conference had also encountered serious difficulties. The letter said:

the convening of a conference had been delayed by treacherous designs. The USA put forward all kinds of unreasonable restrictions on the participations of neutral nations in the political conference attempting thereby to prevent them from playing their due role in the political conference. At the same time, the US Government is procrastinating and has not even undertaken serious discussion on the question of time and place. Thus a stalemate exists in the entire discussion between the two sides. It has bogged down in endless debate, deliberately arranged by the US side.

"If the UN General Assembly should evade its responsibility toward the situation and not condemn the wayward actions of the USA, the seriousness of the Korean situation would be increased and the UN would become even more a tool of the US Government in creating international tension."

Speaking at Panmunjon on December 8, General Thimayya told the Press that it was really up to the UN and Communist Commands to decide what to do with unrepatriated prisoners if the Korean conference was not convened by January 22, the deadline. He said that if the two sides could not agree by then, he did not know what should happen but "I expect the Indian Government would have to decide."

Asked what would be done in the event of any attempted breakout, General Thimayya said that if they used force one command would condemn the Indian custodians; if they did nothing, the other side would condemn them.

On Nov. 28, Mr. Arthur Dean, Chief UN negotiator with the Communists at Panmunjon, agreed that neutral nations should attend the Korean Peace Conference as non-voting observers. This was the first time the American diplomat had specifically accepted the principle of neutral observers at the Political Conference—as the peace conference is called. Mr. Dean also suggested that Geneva should be the venue for the conference.

The Communists have been insisting on Panmunjon. The question of composition is regarded as the main stumbling block to the holding of the conference, although both sides have still to agree on the time and the place for the meeting.

Mr. Dean reiterated that he would never agree to the Soviet Union attending the conference as a non-voting member. He suggested to the Communists that the peace conference decisions should be binding on all its signatories who should include Russia. Mr. Dean did not name any countries that might qualify as "non-voting observers" but limited his choice to "some or all of the Governments now working in Korea" or, if any of them do not wish to participate "some other Government with actual experience of Korean problems."

The five neutrals working in Korea on post-truce agencies are India, Sweden, Switzerland, Poland and Czechoslovakia.

Dean Breaks off Talks: Mr. Dean on December 12, broke off the preliminary talks with the Communists after they had accused the USA of "perfidy" in plotting with the South Korean Government to release prisoners in June 1953. After a meeting lasting 5 hours 45 minutes, Mr. Dean said the talks would not be resumed unless the

Communists withdrew their statement and asked for the meetings to be continued.

The USA delegate accused the Communists of violating the Armistice Agreement and the Geneva Convention by illegally holding American and South Korean prisoners of war, despite the assurances that all who asked for repatriation had been sent back to South Korea. Mr. Dean's outburst was made after the North Korean delegate asked if Mr. Dean really represented the 17 nations who fought the Communists in Korea and referred to the release of 27,000 prisoners by South Korea after the signing of the armistice. Mr. Dean told the Communists they had lied when they certified that all Allied soldiers captured in Korea had been repatriated or turned over to the NNRC. He said, "You are still illegally withholding American military personnel in China or Manchuria. You have kept thousands of Koreans captured from the Republic of Korean Army."

It may noted here that on June 18 twenty-five thousand anti-Communist North Korean prisoners swearing loyalty to South Korea were freed by order of President Syngman Rhee on his own responsibility.

The Communists proposed that the duties of the Secretariat of the political conference should be handed by the UN Secretariat. On August 28, the UN General Assembly unanimously adopted a resolution which said in part that the Secretary-General should provide the political conference, with the agreement of both sides, with "such services and facilities as may be feasible." The Communists objceted to the provision in Mr. Dean's plan that only those nations voting on an issue should be bound by the agreement. South Korea and the other Allies had differences of opinion in the past, and this might make the South Koreans evade the vote so that they could not be bound by the agreement.

Mr. Dean's plan sets out as voting participants in the conference the 16 nations who fought in Korea plus South Korea, North Korea, Communist China and Russia.

On December 16, Lt.-General Trimayya, the Chairman of the Neutral Nations Repatriation Commission, said that he would release non-repatriated prisoners in Korea on January 22—unless the Communist and Allied commands agreed that they should be held longer.

NNRC REPORT ON POW REPAT RIATION SCHEME :

On December 27, 1953 the Neutral Nations Repatriation Commission forwarded to the KPA and CVA Command and the UN Command its report adopted by a majority vote (India, Poland and Czechoslovakia), Switzerland and Sweden abstaining. The latter presented their minority report the same day. The majority report asked the United Nations and Communist Commands to give earnest consideration to the position of more than 22,000 war prisoners still unrepatriated. It said that it could not record a finding that the North Korean and Chinese POWs in the custody of the NNRC in the Southern camp "were completely free from the influence of the former detaining side (the UN Command) and in particular of the authorities of the

Republic of Korea (South Korea), whose incursions made it impossible for the Commission to come to any other conclusion.

"The Commission also became aware of the fact, that the prisoners delivered by the UN Command were well organized. The main object of such organization was to resist repatriation and prevent such prisoners as desired repatriation from exercising their right. In pursuance of this objective, force was being resorted to by one set of prisoners against another with the result that any prisoner who desired repatriation had to do so cladestinely and in fear of his life."

The official report, a 44-page document adopted by the Czechoslovakia, Polish and Indian members of the Commission made no suggestion as to the disposition of these prisoners. Swedish and Swiss members of the Commission did not vote on its adoption and a separate report bearing their signature accompanied the official report.

The Commission said that it could refer the question of disposition of prisoners of war who had not exercised their right of repatriation, to the Political Conference envisaged in the Armistice Agreement as such a Political Conference had not materialised. Consequently the Commission was obliged to refer the entire matter for consideration by the two Commands in the light of the report of the Commission.

Referring to the procedure for explanations, the report said: "The conception of the two commands about the conduct of explanations were so divergent that no common basis could be found for the Commission's guidance. The Commission had therefore to exercise its own independent judgment in elaborating such rules of procedure as would ensure strict fulfilment of the terms of reference, having regard to the state of affairs prevailing within the prisoners' camps and the lack of understanding displayed by the prisoners about the entire explanation work.

In accordance with article 1, paragraph 1 of the terms of conference, the Neutral Nations Repatriation Commission was set up "in order to ensure that all prisoners of war have the opportunity to exercise their right to be repatriated." Paragraph 3 of the same article provided that "no force or threat of force shall be used against the prisoners of war....to prevent or effect their repatriation and no violence to their persons or affront to their dignity or self-respect shall be permitted in any manner for any purposes whatsoever....'

As no prisoner, while still in the compound, enjoyed freedom to seek repatriation and was subjected to force or threat of force, the Commission became convinced that explanations could not be conducted in the particular manner prescribed in paragraph 8. The organised shouting and violent demonstrations would have frustrated such a procedure. The Commission had to elaborate additional provisions governing explanations in order to give effect to the terms of reference, and in particular, paragraphs three and eight thereof. The power to prescribe such additional provisions was derived from article 3 paragraph 8(D) of the terms of reference.

"The most important provisions thus adopted related to explanations in individual prisoners of war. Paragraph one to seven of the rules of procedure governing explanations were all intended to create conditions for the carrying out of the terms of reference.

Despite all the care the Commission took in endeavouring to create a proper atmosphere for the conduct of explanations work, it cannot record a finding that even those prisoners of war in its custody in the South Camp who went through the process of individual explanations were completely freed from force or threat of force arising from and intimately connected with camp organization and its leadership. It must however be stated that the commission could not, in the opinion of the majority, in the circumstances and within the time and resources at its disposal, do anything more than to provide facilities for individual explanations. The Czechoslovak and Polish members of the commission stated that this was not enough; and it was necessary at the same time to reorganise the prisoners of War Camps and to segregate the ring leaders and the alleged "agents".

"The Commission also noted that the UN Command's views coincided with those held by the "representatives" of the prisoners who continued to display hostility to the conduct of explanations.

"On the morning of October 15, when the explanations commenced, the members of the Commission met representatives of the Chinese prisoners from various compounds and assured them that would not be subject to any coercion in the exercise of their free choice about repatriation. Assurances were also given that those who did not seek repatriation would be brought back to the same compound from where they were taken out. Despite similar assurances given to them, the Korean prisoners refused to come out for explanations the next day.

"The Custodian Force was therefore faced with the problem of getting these prisoners out by the use of force. The Commander of the Custodian Force reported to the Chairman of the Commission that the situation within the Korean compound, as well as in the surrounding compounds, had become so tense and threatening that the use of force would probably result in about 300 or 400 casualties.

"In view of the divided opinion inside the Commission on this question, the Chairman, as the Executive Agent, felt that, in a matter of such importance and magnitude, the Commander of the Custodian force was entitled to receive the unanimous support of the Commission; and that the Commission as a whole as the principals, must be prepared to support its executive Agent in all the consequences flowing from the use of force.

"As no unanimous decision could be reached by the Commission, the Commander of the Custodian Force suspended operations and gave up attempts to bring the Korean prisoners out of their compounds by the use of the force.

"The Indian delegation was of the view that it could not accept the assertion that the prisoners had already made up their minds. This was contrary to the facts. Its acceptance would have frustrated the very basis of the Commission which was charged with the responsibility of helping to ascertain, in accordance with the terms of reference, the true decisions of the prisoners on the question of repatriation.

"The conduct of explanations was one of the fundamental and essential functions of the Commission and constituted its most important responsibility. Opposition by prisoners to the discharging of these functions and responsibilities of the Commission was unlawful both under the terms of reference and the rules of procedure. Consequently, force could be used to overcome that opposition.

"The Indian delegation felt that the terms of reference were no impediment to the use of force. But where the use of force was likely to result in heavy casualties among the prisoners it felt that the Commission should give to the executive agent its unanimous authorization and support; that the responsibility for any heavy casualties among the prisoners it felt that the Commission who must be prepared for any consequences flowing from such use of force. It was evident that such support was lacking.

"In the meantime, the Swiss member of the Commission stated his Government might have to consider its very participation in the work of the Commission if force was used to compel prisoners to attend explanations.

"In these circumstances, the Commission had to abjure the use of force in bringing prisoners out of their compounds for explanations. The only method left to the Executive Agent of the Commission was one of persuation.

THE MINORITY REPORT: The representatives of Sweden and Switzerland, in a letter to the Chairman of the NNRC accompanying their minority views, said: "We always considered it the duty of the Commission to prepare a full report on the work of the Commission, but we cannot find any reason to make such a report before the conclusion of the Commission's work.

"As, however, the majority in the Commission has now adopted a comprehensive interim report and as we are not in agreement with its contents, we deemed it necessary to present our standpoints also in a corresponding manner."

In the course of discussions in the sub-committee appointed to draft the report, the Swiss and Swedish members wanted the committee to prepare a short report "to inform the two Commands of the results in the explanatory work at the end of the 90-day period." They held the view that there was "no reason to bring up other points than those directly concerning the several standstills in the explanations."

On December 28, the NNRC asked the UN and Communist Commands to give "earnest consideration" to the position of more than 22,000 war prisoners still unrepatriated. The Commission reported that this number had not been given freedom to seek repatriation through explanations. The majority report of the NNRC made no suggestion as to the disposition of these prisoners.

The Latest Position: The future of Korean prisoners is still undecided. The prisoners in Indian custody are supposed under the terms of the Armistice Agreement to revert to civilian status—but their future is still a question mark. Indian Chairman of the NNRC said on January 4, 1954, that if Allied and Communists sides did not agree to the detention of the prisoners after January 23, the Indians would "have to devise some means of releasing them" and the United Nations Command is preparing to receive those prisoners who decide to go south.

But the Communists still want an extension of the explanations period so that they can complete interviews with North Koreans and Chinese. The majority report of Czech, Polish and Indian members of the NNRC asked both Commands to give earnest consideration to the position of prisoners who had not been interviewed. But the Allied Command has re-affirmed the stand that the explanation period can not be extended and that the prisoners must be released at midnight January 23.

V. PERSIA AND OIL POLITICS

The problem of Persian oil has become a major international issue affecting the foundation of the international oil structure, the role which British interests will play in that structure and the balance of payments for the UK. There has been a big swing over to Middle East oil during the past ten years. In pre-war years Europe imported mainly refined petroleum products, and of the total crude and refined imports in 1938 only 24 per cent came from the Middle East. To-day the percentage has risen to nearly 80 p.c., largely crude oil to feed Europe's new refineries. Refining capacity in Western Europe is already about 70 million tons a year, and the rate is scheduled to reach about 90 million tons a year by the end of 1953. Britain's share in this refining capacity will amount to about one-third of the total—a spectacular rise from its 1938 output of 2·5 million tons of finished products. It is expected that with the completion of the present refinery programme, western Europe will have an overall self-sufficiency in refined products, even including bunker needs, imports being required only in marginal quantities of special grades. This means that oil supply in Europe becomes entirely a matter of finding sufficient crude oil to feed her domestic refineries. As matters stand at present the Middle East and only the Middle East can meet this huge need.

In the past, crude oil production and refining capacity in the western hemisphere were sufficient to meet not only the needs of that area but to supply a large part of European demand. Today the rise in the USA domestic demand has turned that country into a net importer, while the level of requirements in Europe has about doubled since 1938. The European refinery plan has been based on the expectation that up to 90 per cent of crude requirements will come from the Middle East, Venzuela providing most of the balance. Europe is the main customer for Middle East oil, but the needs of other countries must not be forgotten. The new refineries in Australia, India, East Africa and Aden are all planned to work on Middle East crude oil.

Crude production of Middle East oil is today running at about 100 million tons a year, of which nearly 20 million tons is refined near the source for sale as refined products. These figures exclude the idle production and refining capacity of Persia. In 1938 the area produced just over 14 million tons of crude oil, that is, 6 per cent of world crude oil output. During the past three years output has risen from 84 million tons in 1950 to more than 100 million tons in 1952, that is more than 16 per cent of the world's total. The loss of Persian crude oil is however a serious factor in the European economy because it substantially reduces the availability of non-dollar oil.

From the European viewpoint two essentials emerge: that the continued supply of Middle East crude oil is vital to the European refining industry, into which immense capital and material resources have been sunk, and that the loss of non-dollar oil is a big factor in the balance of payments. Cleary the European consumer requires a solution of the problem which will both safeguard his crude supplies and minimize his dollar expenditure.

For the UK and for British interests generally the situation is of course, is one of more intimate importance, since the strength of Britain's hold on crude oil supplies has suffered a serious set back through the nationalization of the Persian oil industry.

By the end of the first decade of this century the British navy had decided to abandon coal in favour of fuel oil. The problem of securing, a safe, sufficient and permanent source of supply became therefore a matter of national importance. It was now that the Persian venture got its stimulus. On July 17, 1913, Mr. Churchill, then first Lord of the Admiralty, announced to the House of Commons that the Government had acquired a majority interest in the Anglo-Persian Oil Company.

By the end of the 1914-18 war interests in the USA were pressing for the right to enter the Middle East oil area. United States capacity to produce and refine crude oil was stretched to the limit. There was a real fear that the oil reserves of the country had been overtaxed and that the USA had spent its resources to lavishly in the cause of the allies. The fear went farther, that the British would pursue a "closed door" policy which would in effect, secure a world empire in oil to the detriment of the American expansion.

The San Remo agreement of 1920 saw the end of German participation in what is now known as the Iraq Petroleum Company, a share being transferred to the French Government in return for concession rights to build a pipeline connexion to the Mediterranean across Syria.

The American State Department and Standard Oil (New Jersey) demanded a share in the former German holdings, but it was some years before American interests were admitted to Iraq.

During the 1920's Anglo-Persian, Royal Dutch Shell, Standard Oil (New Jersey), Socony Vacuum, Gulf Oil Corporation, and French interests came gradually to an arrangement over the respective shares in the Iraq Petroleum Company, and the agreement concluded in 1928 gave the American Companies a total participation of 23¾ per cent. From the late 1920's onwards feeling between the American and British interests died down, because by then American companies had not only joined with British, Dutch and French interests in Iraq and in British interests in Kuwait but had also broken new ground in the Middle East, first on the island of Behrein and later on the mainland of Arabia.

Thus the decade before the second world war saw the alignment of power in the Middle East oil areas. The British were established in Persia and held a share in Iraq and Kuwait. American interests held the exclusive rights in Saudi Arabia and Behrein, a share with British, French and Dutch interests in Iraq, and a half share with the Anglo-Iranian Oil Company in Kuwait.

Between 1939 and 1943 demand in the USA rose by 25 per cent. Military requirements in the early years of the war threw the burden of supply almost entirely upon the USA and South American States. After Pearl Harbour, when the oil fields of the Dutch East Indies were lost, the need for exploitation of the oil resources of the Middle East became a matter of strategic urgency. Once again it was claimed that the resources of the Americas were near exhaustion. Imagination in the USA was caught by the reports of the De Golyer Mission about the size and abundance of the Middle East reserves.

The move was made swiftly and on a gigantic scale. Capital requirements were immense and the development could certainly not have been achieved by British oil interests only. With the combined capital and material resources of the major British and American companies, very rapid progress was possible. Investment in the area must now be at least £ 700 million a year.

The Abadan refinery with its potential output of over 500,000 barrels per day is the largest in the world. The only other two refineries of size on the Gulf—Aramco's at Ras Tanura and the Behrein Petroleum Company's plant at Behrein—can each put through about 200,000 barrels a day. Other refineries in the Middle East are small tapping plants only. With the disappearance of Persia's oil from world markets and with the rising tide of world consumption, the oil companies operating in the Persian Gulf have stepped up production to meet the rising demand.

On March 20, 1953, Dr. Mossadeq, Iranian Prime Minister, rejected the latest Anglo-American proposals, which were a continuation of the joint proposals of last August. They covered three points: (1) reference of the question of compensation for AIOC to the International Court at Hague for adjudication; (2) facilitation of future oil sales from Iran; and (3) furnishing of immediate financial aid to Iran.

Dr. Mossadeq by this time began to incur the hostility of both the Shah and the Army simultaneously. On 3rd March, the police arrested the former Opposition leader, Mr. Jamal Imami, three generals, and a number of Tudeh Party leaders in a new roundup following three days of political turmoil. Colonel Zahadi was charged by the new Chief of Staff, General Riahi. Marshal Shahbakhti, former commander-in-chief of Iran's Azerbaijan Province was also arrested.

Dr. Mossadeq then proceeded to curtail the powers of Shah. He intended to assume dictatorial powers, although on 6th April, he reiterated his loyalty to the Shah and the Constitution. "In constitutional monarchies the sovereign has no responsibility to govern. "The Shah should reign and not rule," declared the Prime Minister. Dr. Mossadeq said that before oil nationalization there were no differences between the Government and the Court. Ever since nationalization, however, such intrigues had increased.

On October 22, Iran informed Britain that she had severed diplomatic relations with her.

Mossadeq claimed absolute dictatorship. He did away with the Senate, dismissed judges at will, captured power. The Majlis was helpless; it sanctioned him special powers to govern Iran as he liked. It was all right as long as Mullah Ayatullah Kasani, Speaker of Majlis and unofficial ruler of Persia's street gangs, was on his side. But soon Mossadeq and Kashani parted company. Kashani and the Shah drew closer, while Mossadeq leaned more and more on the Tudeh Party. Mossadeq not only succeeded in silencing the Shah, but even forced him to exile his sister. He threw 50 men out of Majlis having 128 seats for one reason or another. Now inside the Majlis, Mossadeq had 38 supporters, while the Opposition had 40. He taught Kashani a lesson by withdrawing his men from Majlis, leaving it without a quorum. Later he ventured to disband the Majlis itself by a nominal referendum and defied even Kashani.

The results of the referendum in Teheran early in August suggested popular support to the Mossadeq regime. The referendum was instituted to obtain popular sanction for the dissolution of the Majlis—the Lower House of the Iranian Parliament. The Upper House—the Senate—was dissolved earlier by Dr. Mossadeq. The Majlis had been virtually ineffective as all the supporters of Dr. Mossadeq had resigned from it, thus leaving the House without a quorum. The Shah appeared to wield little or no power at all and apart from the economic crisis, Mossadeq was master of the situation.

Then came the news of the abortive Royalist coup and the Shah's flight from Iran. Teheran radio announced that at 11-30 P.M. on August 15, 1953 the officers of the Shah's Imperial Guards under Colonel Nasiri attempted to overthrow Mossadeq Government by a millitary coup d'etat. Dr. Hussein Fatemi, the Foreign Minister and two other Government leaders were arrested by the insurgents. The Government successfully dealt with the revolt, put Colonel Nasiri in jail and ordered disbandment of the Royal Guards. The royalist coup was directed to instal Gen. Zahedi as the Prime Minister.

The Shah flew out of the country on Aug. 16 to Baghdad from where he went to Rome. He said that he had appointed Major-General Zahedi to succeed Mossadeq as Prime Minister. Earlier Mossadeq was informed by Zahedi that he had been dismissed by the Shah and that he should hand over the charge to Zahedi. Mossadeq refused to comply with the Shah's order. Zahedi meanwhile went into hiding in Azerbaizan and the Persian police were on the look out for him.

The Mossadeq regime was overthrown by the second Royalist coup on August 19. Mossadeq was arrested on Aug. 20. Subsequently he was tried by a military court and sentenced to three years solitary confinement.

The Shah returned to Teheran on August 22. Zahedi is now the Prime Minister. The Shah declared: "The Anglo-Iranian exists to more in Iran. The oil has been and remains nationalized." From December 5, Iran and UK resumed diplomatic relations.

VI. TRIESTE QUESTION

After the Second World War, Trieste was divided into two zones—Zone A including the city itself and Zone B. The former was placed under Anglo-US military occupation and Zone B under the Yugoslavs. It was a temporary arrangement and the whole question was to have been settled by the UN, but so far no agreement has been possible.

When it became evident that agreement with Russia on Trieste could not be reached the two Governments, Britain and the USA, continued to be responsible for the administration of Zone A in the hope that the Italian and Yugoslav Governments might be able to reach an agreement. Instead however, there has been a recent serious estrangement of feeling which reached its peak early in September, 1958 after Italian ships had been moved to Venice and Italian troops to the Italo-Yugoslav frontier. It was clear that the two countries were more than ever apart, and that merely to maintain the *status quo* would not prevent further and possibly more serious eruptions of national feeling in the future.

The division of territory along the present boundary is not however a perfect solution—indeed, no solution can be perfect in a territory where the ethnic map is a shifting patchwork, almost a draftsman's nightmare. The present division will leave some 50,000 Slovenes in Zone A under Italian administration and some 20,000 Italians under Yugoslav administration in Zone B.

The Italians have long claimed the whole territory in view of the three-Power declaration of 1948. This was made before the Yugoslav Cominform split, and said the whole territory should become Italian. The Italian peace treaty has provided for the eventual internationalization of free territory, but it proved impossible to reach an agreement on the appointment of Governor, and there is no prospect, at any rate in the immediate future, that the Soviet Government will agree any more readily to the step which is now being taken. Russia favours the handing over of Trieste to Italy.

From the British viewpoint, settlement has long been desirable, as the administration of Trieste has tied down some 5,000 British and some 5,000 American troops in Zone A at a cost to Britain of some £2 million a year.

On October 8, Britain and the USA announced that they would withdraw their troops and hand over the zone A of Trieste to Italian control. The zone with a predominantly Italian population includes the port of Trieste. Zone B which has been under Marshal Tito's control since the war remains Yugoslav. The area is largely Slovonic in character.

On October 10, President Tito announced that his troops had entered Yugoslav-occupied Zone B of Trieste, from which they were withdrawn at the end of the war. He declared that his country would regard the entry of Italian troops into the adjoining Zone A as an act of aggression. He demanded that the Anglo-American decision to withdraw.

He said: "Italy has no right to Trieste and we do not recognise the Anglo-American Act on the ceding of Zone A to Italy. Yugoslavia has the right to take all measures at her disposal under the UN Charter, including the use of armed force for the defence of peace."

On December 5, Italy and Yugoslavia however agreed to withdraw the forces and they moved up to their common frontier in October.

VII. SULTAN OF MOROCCO DEPOSED

On August 20, 1953 the French Government deposed the Sultan of Morocco, Mohammed V, and banished him with his two sons, from the troubled Protectorate. On 21st August, Sidi Mohammed Ben Moulay Arafa was proclaimed Sultan of Morocco in succession to his cousin, whom the French sent into exile to Corsica. The new ruler was proclaimed spiritual and temporal leader of the French dominated Protectorate.

VIII. DEVELOPMENTS IN GUIANA

On August 9; Sir Alfred Savage, Governor of British Guiana, declared a state of emergency, suspended the six-month old constitution and dismissed the first popularly elected Government headed by Dr. Chedi Jagan, with a view to "prevent Communist subversion of the Government and a dangerous crisis both in public order and in economic affairs." The Governor declared that he would himself run the administration with the help of advisors. A commission of enquiry would be appointed to recommend on a new constitution.

The British Government are of opinion that the elected ministers and the People's Progressive Party are completely under the control of a communist clique. It was clear from the actions and public statements of the leaders of the People's Progressive Party, the statement continued, "that their objective was to turn Guiana into a totalitarian State—subordinate to Moscow and a dangerous platform for extending Communist influences in the Western Hemisphere." The statement charged the leaders with having tried to undermine the loyalty and discipline of the Police force and of persistently intruding into the sphere of the Public Service.

Dr. Jagan later came to India to acquaint the Indian people and Pandit Nehru with the developments in Guiana. Mrs. Jagan ha been convicted to serve a term of imprisonment.

IX. FORMOSA—THE ISLAND FORTRESS

In 1949, Chiang-Kai-shek's army arrived in Formosa, defeated and driven out of the mainland by the Chinese comm Since then America is helping Chiang. The combination of Am aid and a determined effort at regeneration on the part of the Nationalists has indeed done much over the last four years to improve the relations of the Formosans with the new government at the mainland. Inflation, one of the main causes of the downfall of the Kuomintang on the mainland, has been curbed, and the currency pegged to the US dollar.

The Kuomintang party has also had its reforms. Corrupt officials have been dismissed, and with the exception of Chiang himself, there are few in senior positions with a "past" to live on. Lack of reserves is the Nationalist weakness in all field, militery, financial and civilian—for few mainlanders of quality reach Taipeh.

The USA is supporting the Nationalist China at UNO—The United States could hardly hope to be able to continue support of the Nationalists in Formosa if communist China were represented at UNO. For if it were voted into the Nationalist's seat as the de jure Government of China, one of its first acts would probably be to accuse the United States of suggestion in helping a rebel faction. Some at least, of the Governments that had voted for the Peking Government would then feel bound to condemn American policy in Formosa. This would create between the United States and its friends a rift much more dangerous than anything yet experienced at the United Nations.

There is no more prospect of the Americans abandoning the island to Communist conquest than there is of the Chinese abandoning North Korea to Syngman Rhee. Hence the widely spread impression that a rigid and doctrinaire American obstinacy is at odds with British realism and desire for peace. Actually it is two sets of facts that are at odds : on the one hand Communist China, with massive supplies from the Soviet Union, controlling the mainland and acting as a great power in the Far East; on the other hand Nationalist China holding Formosa with American assistance and protection.

X. BERMUDA CONFERENCE

In the summer of 1953, Mr. Winston Churchill proposed for holding a conference of Big Four. But President Eisenhower was against such meeting as in his view no useful purpose would be served at this stage by a conference with Russia. However, after prolonged negotiations, a meeting of Big Three was held at Bermuda in December, 1953.

On December 5, 1953, President Eisenhower, Mr. Winston Churchill, and M. Laniel held their first meeting at the Mid-Ocean Club, Bermuda. They do not see it as an occasion for detailed negotiation r hard decision among the three Powers, but as an opportunity for meeting for better understanding of each other's problems.

It may be noted here that Russia also suggested for a Big Four ting. At the Bermuda Conference the proposal to hold such a erence was confirmed.

None of the three delegations had much hope for the successful me of the proposed Berlin conference. The Western Powers maintain that the first step in any German settlement must be free all-German elections prior to the establishment of a Government to negotiate a peace treaty with the allies. The Russians want to reverse this.

Nobody at Bermuda thinks the Russians will change their minds about holding free elections because the uprising in the Eastern Zone in June last has shown that the resulting all-German Government would be strongly anti-Communist.

XI. DEVELOPMENTS IN VIET MINH

In 1946 Ho Chi Minh, the ruler of Viet Minh, reached a negotiated settlement with France which subsequently broke down through a succession of adverse incidents, but not without some evidence of an original intention on Ho's part to make it work. Although in some ways, with communist China aiding the Viet Minh with supplies and the USA participating more and more in the struggle against it, the situation is even more complicated now and intractable than it was in 1946, nevertheless the exhaustion of the country after six years of war and the longing of the Vietnamese people for peace put pressure on the political leaders of both sides so long as neither looks like winning.

At the end of the Pacific war in August 1945, the Japanese controlled the Indo-China, including Viet Nam, after having crushed and disarmed the French Colonial troops five months previously in order to prevent them from going over to the new Gaullist France (which was at war with France). On the northern frontier of Viet Nam there was a Chinese army ready to move in, and with it were units of Vietnamese guerrillas controlled by a Chinese sponsored federation of three revolutionary parties among exiles in China—the Vietnam Quoc Dan Dang (the VNQ), the Dong Minh and the Vietnam Doc Lap Dong Minh (the Viet Minh); of these the first two were purely nationalist, the Viet Minh was dominated by the Indo-Chinese Communist party led by Nguyen Ai Quoc, a former member of the French Communist party who in 1943 took the new name of Ho Chi Minh. The Viet Minh had a better underground organisation within Vietnam than the other two parties, and the Chungking Government recognised and subsidised Ho as the leader of the Vietnam national movement.

This was done in spite of the increasing tension between the Kuomintang and the Chinese communists (with whom the Viet Minh always had close links). Kuomintang policy was to prevent any restoration of French power in Vietnam after the defeat of Japan, and for this purpose the Viet Minh had to be supported, even if it was Communist-led. But the Kuomintang also counted on its own army of occupation to regulate the postwar affairs of Indo-China; Chungking arranged with America, in spite of French protests, that China should take the Japanese surrender in Indo-China north of lat. 16 N, the southern portions being left to Admiral Mountbatten's South-East Asia Command. The Japanese might have been ordered to release and rearm their French prisoners, but they were not; they were given to understand that both the United States and China supported the Viet Minh, and so they turned over local authority to the latter.

Soon after the end of the war, however, a French expeditionary force arrived in the Far East and, with the co-operation of South-East Asia Command, occupied Saigon, dispersing the Viet Minh in the south of Indo-China. But in the north a Viet Minh Provincial Government headed by Ho Chi Minh consolidated its position under Chinese protection; the titular emperor of Annam, Bao Dai, had abdicated and lent his prestige to the new regime with the title of Supreme Adviser. Faced with this situation, the French opened negotiations concurrently with Ho Chi Minh in Hanoi and with the Chinese Government in Chungking. To Ho they offered recognition of the "Republic of Vietnam" as a "free state" within the Indo-Chinese Federation and the French Union, but not the *doc lap* or complete independence claimed by the Viet Minh. To China they offered renunciation of various prewar French treaty rights in return for transfer of military occupation control in Tongking. By the beginning of 1946 American policy had become much less hostile to French colonial interests than it was in President Roosevelt's time, and the Chinese Government, diplomatically isolated, came to the conclusion that a bargain with France was worth while. The treaty was signed on February 28th.

Ho Chi Minh, meanwhile having failed to obtain recognition for Vietnam from America and no longer able to rely on Chiness protection, decided to make a compromise agreement with France, dropping the demand for doc lap. But the VNQ and Dong Minh were in opposition, denouncing any compromise as treason; it was clear that they would capture the leadership of the nationalist movement if the Viet Minh abandoned doc lap. Ho therefore went to the ex-emperor Bao Dai and proposed to hand over to him full governmental power for the purpose of reaching an agreement with France. Before Bao Dai had time to consider the offer, Ho withdrew it. The manoeuvre had alarmed the Chinese with the prospect of a collapse of the nationalist movement, and the Chinese political representative put effective pressure on VNQ and Dong Hoi to enter a coalition with the Viet Minh so that all parties would share responsibility for a compromise settlement. There was still, however, delay in reaching it because an agitation within the Kuomintang sponsored by the War Minister, Ho Ying-chin, caused China to adopt the attitude that the change-over in Tongking could not take place until the staff arrangements were complete and that these were conditional on a Franco-Vietnamese agreement.

The renewal of Chinese military support enabled Ho a return to the demand for doc lap, which the French delegate, Sainteny, was forbidden by instructions from Paris to concede. But French troop transports were already on the way to Haiphong, and the Chinese War Minister, who was ready to risk war with France, ordered the Chinese commander at Haiphong to resist the landing by force. Throughout March 5th, while the French fleet hour by hour approached Haiphong, Ho Chi Minh argued interminably with Sainteny in Hanoi about the meaning of doc lap. The next day hostilities began at Haiphong, where the Chinese artillery opened fire on the French fleet at 8-30 in the morning ; undeclared war between China and France continued for over two hours with casualties on both sides. Ho Chi Minh depends entirely on the Chinese military support, of Kuomintang China in 1946, of communist China. The French army has been suffering heavy losses recently.

INDIA'S FOREIGN POLICY

GENERAL SURVEY

In the international field, India has played a significant and original role. Whether she will succeed in creating the wide area of peace in Asia which is her aim, remains in doubts, but to her good offices is due the end of fighting in Korea. Lately, proposed military aid by U.S.A. to Pakistan has dominated the public imagination to the exclusion of almost everything else. As a focus for the expression of the feeling of national unity, it has served a useful purpose—the only one, as India sees it. The resurgence of colonialism in various forms has been watched anxiously. But under Mr. Nehru's leadership, India continues to play an important part in the Commonwealth. With Pakistan, except for the recent formidable stumbling block of U.S. Military aid, relations have much improved. The Prime Minister of Ceylon, Sir John Kotelawala has proved rather more accomodating than his predecessors over the thorny problem, that of Indians in Ceylon. Relations with Burma have continued friendly. Talks have begun with China about Tibet. A trade agreement has been signed with Russia. The U.S.A. despite wide divergences of opinion has continued to be helpful. Over foreign enclaves there has been little progress. Withdrawal of Indian deplomatic representatives from Lisbon has had no apparent effect. A pleasant mark of international esteem was the election of Mrs. Pandit as the President of the U. N. Assembly.

The deepest strand in Indian thinking on international affairs is still distrust of western colonial control. Almost the whole lifetime of India's present leaders was spent struggling against the British Raj and today, although the old colonial empires have largely disappeared, any protest by local nationalists against their western rulers touches a chord in India whose vibrations silence everything else.

It is an irony of history that the United States, almost a aggressive an opponent of imperialism as India itself, should now find itself tarred with the "colonial" brush. For this, the once potent influence of Marxist thinking, with its identification of capitalism and imperialism, is partly to blame. America's post-war involvement in the Far East has also appeared to repeat the earlier incursions of the European powers. But it is over China that mutual misunderstanding has been greatest. India's present leaders feel a sense of profound kinship with China. They recall secular links between the two great civilisations, the conversion of much of China to Buddhism by Indian missionaries, the thousand years of peaceful trade and influence interrupted, in their eyes, by the irruption of the West into

Asia. On this scale of historical memory, it was at first easier and more natural to see the Chinese communists as men determined to end all western control in China than as totalitarians bent on a new imperialism of their own.

The remarkable fact of Indian policy in its first five years of independence is the extent to which these deep historical instincts have been balanced by the recognition of new realities in world affairs. The vision shown in Britain's grant of independence has been rewarded by India's decision to retain its association with the Commonwealth. The outstanding achievement of the American Ambassador, Mr. Chester Bowles—now unfortunately replaced—has been to interpret the generous and liberal aspects of United States policy to India's leaders. The American wheat loan, the beginnings of the Point Four Programme, the imaginative assistance offered by the Ford Foundation have all reinforced the Ambassador's energetic and successful efforts.

At the same time, the communists themselves are contributing to a steady modification of India's ideas. The Chinese, not content with removing western control, have imposed their own by force upon Tibet, and there is a growing anxiety, particularly in West Bengal, over the number of communist agents who appear to be active in the buffer states of Nepal and Bhutan. Soviet Russia's reputation is not enhanced by the new wave of purges and the Czech trials received great publicity in the Indian press. Many Indians were also dismayed by the fate of their compromise resolution on Korea at the last General Assembly of the United Nations. Its brusque rejection by Mr. Vyshinsky before Peking had either given a private hint to Delhi or any public rejoinder suggested a sinister degree of Soviet control over Chinese policies.

But it may well be that the actions of India's own communists will prove a decisive factor in Indian disillusionment. The flood of Soviet-financed propaganda continues. The direct incitement to all local communist parties to oppose and undermine their own Government contained in Stalin's message to the October Moscow Congress was formally denounced in the House of the People as an "interference in India's internal affairs." Typical of their activity is their plan to use a separate Andhra State as a base from which to extend the process of linguistic fragmentation. Agitators in the Carnatic districts of Bombay are already demanding separate statehood and the communists are behind all attempts to disintegrate such existing states as Hyderabad into linguistic provinces.

NEHRU, THE REALIST

Addressing a meeting of members of the Indian Parliament in Delhi on 16th February, Mr. Aneurin Bevan called for the creation of a "third bloc of nation holding the world balance of power and compelling the two giants to listen to what they have to say". He might well have expected an enthusiastic response. Instead of Mr. Nehru, who had been among his listeners, told the Upper House of Parliament later on the same day that "the idea of a third bloc frightens or embarrasses people"; that if it meant a military power bloc it was both undesirable and impossible; and that it would be better to encourage, "without too much shouting" those countries that wanted peace and did not wish to align themselves with any bloc.

"Non-recognition of reality" said Mr. Nehru later in the same speech "leads to artificial policies." He was speaking of the acceptance of Chiang-Kai-Shek as representing China; but his text was apt in a wider sense. Only a supremely unrealistic mind could visualise a bloc of large but weak Asian states as holding the world balance of power. The resolution of Korea which was laid before the United Nations last year was presented in the sincere belief that it corresponded largely to the Chinese viewpoint; but it was nevertheless courtly rejected by Vyshinsky.

SUEZ QUESTION

On 14th August, the Prime Minister, Pandit Nehru, stated in the House of the People that the Government of India were in no way committed to any particular interpretation or implementation which the British Government might have in view, of the broad propositions mentioned in the communique issued after the Commonwealth Prime Ministers conference in London, in regard to the question of evacuation of the Suez Canal Zone.

The communique, said the Prime Minister, stated certain broad propositions, the most important of these being that outstanding issues in the Middle East should be settled on the basis of ensuring the peace and security of the Middle Eastern countries consistently with the sovereignty of each, and promoting their social and economic development. Further it recognised the international importance of the Suez Canal and the desirability of the maintenance of the installation in the Canal zone.

The Prime Minister said the Government of India agreed to these general propositions. He added: "So far as is known, the present dispute between the UK Government and Egypt does not relate to these general propositions but to their interpretation and implementation. The Government of India are not committed to any particular interpretation or implementation which the British Government may have in view. They have always been of opinion that any agreement should be based on a recognition of the full sovereignty of Egypt."

SUDAN COMMISSION

India agreed to serve on the Sudan Electoral Commission which supervised the elections there. Sri Sukumar Sen was deputed for this purpose and he served as the Chairman of the Sudan Election Commission.

INDIAN AND BURMA

India became the strongest supporter of Burma's complaint to the UN about the aggression committed by "Chinese

Nationalist" troops in Burmese territory. The Prime Minister of India informed the House of the People in March that KMT in Burma were causing mischief. It is now known that a closer study of the situation was among the principal objects of his visit to the Indo-Burmese border, where he was joined by Burma's Premier, U. Nu.

Discussions between India and Burma on this issue have also revived interest in Burmese allegations that KMT troops along Burma's north-east frontier are operating with American assistance. The US military authorities has denied the charge that America was supplying ammunition and weapons to Chinese Nationalist forces in North Burma.

POLICY TOWARDS FOREIGN MISSIONARIES :

Dr. Katju, central Home Minister, said on April 21, 1953, that it had been made clear to all foreign missionaries working in the country that if they were engaged in social welfare work, medical work and education, they are welcome; but if they indulged in proselytization, it would be undesirable. That was the basic rule governing the Government's attitude. The Home Minister was replying in the House of the People to Mr. Jangde who wanted to know whether the Government had received any complaints from the Madhya Pradesh Government or the local population that in many places in Sarguja and Bilaspur districts of Chhattisgarh, Adibasis were given monetary inducements, sometimes threatened, and then converted to Christianity, and that the temples of the Adibasis were being turned into churches.

Dr. Katju said that certain reports containing allegations that foreign missionaries were engaged in proselytizing activities which offended the feeling of the non-Christian local population had been received. The Government was taking necessary steps to check objectionable missionary activities where they existed.

INDIA & CEYLON

On July 20, 1953 the Government of India issued instructions that the passport regulations governing the entry of persons into India from Ceylon should in future be strictly enforced.

According to the Indian Passport Rules, all persons entering India are required to have valid passports and Indian visas with the general exception of commonwealth citizens who require passports and Indian visas with the general exception of Commonwealth citizens who require passports but nor visas for entering India.

Until a few years ago persons domiciled in India and Ceylon were not required to carry any travel documents when travelling between the two countries. In 1949, the Ceylon Government imposed regulations which required Indian citizens travelling to Ceylon to possess both Indian passports as well as visas or residence permits granted by the Ceylon passport authorities. Nevertheless, persons claiming to be Indian nationals coming from Ceylon to India were being allowed to land in India without any travel document.

It has been brought to the notice of the Government of India that under this procedure even persons who have no valid claim to be deemed Indian citizens could land in India. To regulate this, the Government of India has now decided to enforce strictly the provisions of the Passport regulations for persons entering India from Ceylon in the same way as they are applied to persons coming to India from other countries.

No change, however, is contemplated with regard to Indian labourers employed on Ceylon estates, who will continue to travel between India and Ceylon on identity certificates issued by the Ceylon estate superintendents according to existing arrangements. Ships plying between Ceylon ports and India will in future have to scrutinise the travel documents of persons embarking in Ceylon for India to verify that they will be allowed to land in India.

Citizenship Rights: The reported attitude of the Ceylon Government not to abide by the Privy Council judgments in regard to liberal interpretation of certain franchise rights of Indian citizens has come as "a disappointment" to the Government of India.

The Ceylon Government announced that it was taking steps to amend the Indian and Pakistani (Residents) Citizenship Act, 1949, to cover the lacuna in the Act disclosed by the recent Privy Council judgment.

The effect of the Privy Council's Judgment was to give liberal interpretation to the terms "ordinary residence of wife and minor children of the applicant" in the Act. The Privy Council held that there was no express provision in the Act that "the husband's permanent settlement in Ceylon must have been achieved in company with his wife or minor unmarried children or that the maximum period of uninterrupted residence required of the husband had any application to his wife or children."

If this judgment had been accepted by the Ceylon Government, it would have benefited a large number of Ceylon Indians. From the present announcement of the Ceylon Government, it, however, appeared that Ceylon did not propose to abide by these judgments.

Colombo referred to the Indian Government's aide memoire of April, 1948 in which it had been agreed by India that, if an applicant for citizenship was married, his wife and minor unmarried children should have ordinarily resided with him in Ceylon. But while the Government of India accepted the principle that a Ceylon Indian permanently settled in Ceylon would ordinarily have his wife and children staying with him, the latter should not be penalized if they made short trips outside the island. Permanent settlement would be judged by the act of taking the family to Ceylon for settlement and not by presence of the family at any particular period.

Although the estate labourer's family permanently resided with him, estate children had no record, until they were 12 when they were legally employable. School attendance records were available only for about 60 p.c. who attended school and that only between the ages of 5 and 10.

An offer of arbitration over the question of citizenship rights of Ceylon Indians was made to the Ceylonese Prime Minister by Mr. Nehru in a statement in the House of the People on November 12.

If the present Bill was enacted, Mr. Nehru added, persons of Indian descent in that category would be deprived of their franchise.

Saying the amending Bill before the Ceylon Government had apparently been occasioned by the judgment of the Privy Council which upheld the decision of the Supreme Court of Ceylon, Mr. Nehru added: "The question at issue is the interpretation to be put on the term "ordinary resident" which occurs in the Ceylon Indian and Pakistani Residents Citizenship Act of 1949. The Prime Minister of Ceylon had expressed his intention of giving effect to his father's (the late Prime Minister of Ceylon) undertaking in this matter.

This was to the effect that as proof of an applicant's real intention to make Ceylon his permanent home he should have his wife and minor children ordinarily resident with him. The meaning was clear. But the Ceylon Commissioner for Registration decided otherwise and stated:

> "(1) That the applicant's wife should be resident in Ceylon from the date of her marriage or the January 1, 1939, whichever is later; and
>
> "(2) That each minor dependent child should be resident with him from the January 1, 1939, or the date of birth whichever is later."

This made even the husband's permanent settlement in Ceylon dependent not on his own qualifications but, in addition, to his wife's and children's residence. The Supreme Court of Ceylon rejected the Commissioner's interpretation. This matter was then taken to the Privy Council by the Government of Ceylon. The Privy Council upheld the decision of the Supreme Court and remarked: "It would be an extraordinary provision that the husband should have to prove for the purpose of his own registration that his wife had been ordinarily resident in Ceylon for a longer period than it has necessary to prove in applying for his wife's registration."

INDIA AND SOUTH AFRICA

The Government of India in a communication, dated March 9, 1953, to the UN Secretary General drew his attention to the declared policy of the South African Government to apply the Group Areas Act in important cities including Cape Town, Durban, Port Elizabeth and Kimberly. This will cause racial bitterness and friction.

Not only are these measures (group area plans) a violation of the purposes and principles of the Charter of the United Nations but they are a deliberate disregard of the resolutions of the United Nations of 1950, 1951 and 1952 recommending the non-implementation of the Group Areas Act.

According to a statement made in the South African Parliament by the Minister of the Interior, group areas will be proclaimed very shortly in a number of places. Accordingly, the Land Tenure Advisory Board has notified group area plans for the various important cities as noted above.

On October 28, 1953, the Special Political Committee of the UN General Assembly agreed by 46 to 4, with 8 abstentions, to continue the Good Offices Commission to assist the Governments of South Africa, India and Pakistan to resume negotiations to settle the problem of the people of Indian origin in South Africa.

The Committee also agreed by 37 votes to 13, with 9 abstentions, to extend the original functions of the Commission asking it to report "its own views on the problem and make any proposals which, in its opinion, may lead to a peaceful settlement of the problem." The vote came at the end of 12-day debate in which India and Pakistan maintained against South Africa's protests that the question was one that came with the jurisdiction of the UN. South Africa had maintained that as the Indians in South Africa were South African nationals the question was one of an essentially domestic nature.

The UN Commission of Inquiry into the racial situation in South Africa suggested in its report on October 27, for the holding of a round table conference composed of all the racial groups in South Africa to consider proposals to the Union Government to facilitate a peaceful solution of the racial problem in that country.

The report said: "As the apartheid policy develops the situation daily becomes more explosive and more menacing to internal peace and to the foreign relations of South Africa. Soon any solution will be precluded and the only way out will be through violence, with all its inevitable and incalculable dangers. Moreover, in this atmosphere of growing tension, there is danger that the forces of agitation and suversion, which the Government is resisting by strong legislative measures, will find increasingly fertile soil. There is serious risk that they may eventually be regarded by non-Europeans as an instrument of liberation.

"The Commission has observed that the racial problem in the Union of South Africa, which results from a policy of segregation is no new thing in the life of that nation and did not begin when the Nationalist Party conceived and began to apply the so-called apartheid doctrine. Almost from the beginning of the European colonization in the mid-seventeenth century such segregation had existed between European and non-white groups in South Africa.

"The doctrine is based on the theory that the white race, as the heir to Western Christian civilization, is in duty bound to maintain inviolate and to perpetuate its position in Western Christian civilization and must at any cost, although in a numerical minority, maintain its dominating position over the coloured races.

"It refutes all dogmas of civic equality, and therefore cannot grant the natives or Bantus, or any other non-white groups, such as the coloured person and Indians, the political rights which the white population enjoys and confer on it the management of public affairs.

"The doctrine also encourage ethnic groups to maintain and develop a 'sense of colour' and to safeguard the purity of their racial characteristics."

The series of apartheid statutes, regulations and administrative measures enacted by the Nationalist Party "affect to a greater or lesser degree all aspects of the domestic, family, social, political and economic life of the non-white population. They affect its most fundamental rights and freedoms; political rights, freedom of movement and residence, property rights, freedom of movement to work and practice occupations, freedom of marriage and other family rights.

They establish obvious inequality in relation to the rights, freedoms and opportunities enjoyed by the 20 p.c. of the population consisting of whites or Europeans or of persons regarded as such.

Referring to the position of Indians in South Africa, the report says: "There are 365,000 persons of Indian origin who either immigrated under contract by virtue of a treaty signed by the authorities which then administered India and the rulers of the territories now belonging to the Union of South Africa, or are descended from such immigrants. These thousands of persons who belonged to the most developed groups maintain ties and relations with the citizens of their country of origin, which now consist of India and Pakistan.

INDIA, UNO AND KOREA

India took a leading part in bringing about the armistice agreement in Korea. The agreement practically was based on an Indian resolution to that effect. China, Britain and some other countries were demanding India's participation in the forthcoming Political Conference on Korea. The UN Political Committee on August 27 voted by 27 to 21 with 11 abstentions, for India's participation in the Korean peace conference. But America is against India's participation.

But the recommendation of the Political Committee had got to be approved by the General Assembly by two-thirds majority. India withdrew her name from the General Assembly voting. The moderating decision of the Indian Mission not to press for a vote in the General Assembly on August 28 was influenced by the evident fact that the two-thirds majority required in the plenary session was denied by the muster of Latin American votes behind the objections of the USA.

On August 17, 1953, in a speech in the House of the People, Mr. Nehru explained India's stand on Korea. He said that the advance party to Korea, led by the Foreign Secretary, was sent to assure itself that India's representatives would be able to function in an honourable capacity. This was vital for "certain improper and undignified statements" had been made on behalf of the South Korean Government about India's representatives and forces. India did not seek a place on the Political Conference unless the major parties wanted her and unless she herself was assured that she could perform some useful functions.

On September 17, Mr. Nehru again referred to the House of the People. He said: "The House knows that the name of India came up repeatedly before the Political Committee of the UN some little while ago and a proposal was made that India might be made a member of the political conference. India was put in a somewhat embarrassing position. We did not put our name forward and we did not want any additional work. At the same time, we are strongly of the opinion, naturally, that this political conference should succeed, that there should be a peaceful settlement in the Far East and that if we can help in that, we should not run away from that help, even though it may involve a burden on us. In the voting there was a considerable majority in favour of India and a big minority against it and a number abstained. There was not the two-thirds majority that would have been necessary if it went to the plenary session and in that late stage we begged those people who had put out name forward not to press it, and so India was out of it."

When the vote was analysed the fact stood out that nearly the whole of Europe and nearly the whole of Asia wanted one thing in this political conference, while a number of countries of the Americas —18 of them from the Americas, including 17 from Latin America— did not want it. Mr. Nehru said: "They have as much right not to want it as we may have to want it, but the question that we have been considering is an Asian question, a question of Asia. Is the will of Asia to be flouted? Is the joint will of Europe and Asia to be flouted because some people who really are not concerned with this question so intimately feel that way? That is an extraordinary position. It was not realized by many of the Great Powers of the world that the countries of Asia, however weak they might be, do not propose to be ignored, do not proposed to be by-passed and certainly do not propose to be sat upon."

On August 28, India withdrew her name frm consideration as a member of the Korean peace conference at the UN General Assembly. The Assembly approved the whole of the Allied plan for setting up a Korean peace conference. The vote was 43 to five with 10 abstentions. It approved the recommendation that all 16 Allied nations which sent troops to Korea be eligible for the Korean peace conference. It rejected the Soviet proposal for a 15-nation conference by 40 to five votes, with 11 abstentions. The Assembly approved by 55 votes to one with abstention Soviet participation in the conference "provided the other side desires it."

The Indian Custodian Forces: There have been anti-Indian tactics by both the belligerents. Confronted by a delicate and difficult task, India's custodian truce forces have been remarkably effective. Their work has been handicapped, however, by hostile criticisms from the communists and the Americans, and by a pumped-up propaganda in some American newspapers and radio-TV broadcasts.

India was accused of distributing among the prisoners leaflets containing communist propaganda, the inference being that this was done at the request of the Communist representatives on the UN Neutral Nations Repatriation Commission. The truth is: previous explanations of the truce repatriation terms, made to the prisoners, were so inadequate and poorly done that a majority could not understand what was to happen. The Commission too, was faced by a serious shortage of translators. In this situation, leaflets were printed in several languages. They dealt with procedures only, however, and had been prepared and carefully scrutinized by the entire Commission, and approved by the Swedes and the Swiss.

At a critical stage, propaganda emanating chiefly from South Korean officials reported that India was to withdraw its troops. Aim of this propaganda was to weaken the Indian authority. To this Mr. Nehru replied: "We shall do our duty, complete our task, and not run away from our responsibilities."

Indians have charged truthfully that their efforts have suffered by interference in violation of the truce terms, both by Communists and officers representing the UN Command. The latter for example, tried systematically for a time to block altogether the Communist explanatory lectures.

American leaders took the attitude that genuine neutrality required of the Indians under the truce terms was the same thing as being pro-communist. General Mark Clark castigated the Repatriation Commission because, according to him, it assumed that all prisoners would automatically wish to be sent home to Communist China and North Korea. The USA Secretary of States, Dulles, in a statement to the press referred to the Commission's neutrality as "so-called." Dulles uttered no word of rebuke to the South Korean regime, which had threatened to break up the work of the Commission by force, nor did he, at least openly, protest the activity of South Korean agents planted among the prisoners to foment riots.

The truth is this: Polish and Czechoslovak members of the Commission insisted that prisoners be compelled by force to hear pleas for their return home; Swedish and Swiss members refused to allow this. The Indians cleverly frustrated the communist members by saying that they would use force only if instructed to do so by a unanimous vote of the Commission—which obviously could not be had.

General Thimayya said on 16th December that he would release non-repatriated prisoners in Korea on Jan. 22—unless the communist and Allied Command agreed that they should be held longer.

PAK-US MILITARY PACT:

Pakistan's decision to receive military aid from the USA has given rise to strong opposition by India. Mr. Nehru has said that it would require revision of India's position of neutrality. The military aid to Pakistan is sure to affect India's strategic position and it is doubtful how far India would be able to maintain her present status of neutral country. It would greatly endanger India's position in Kashmir.

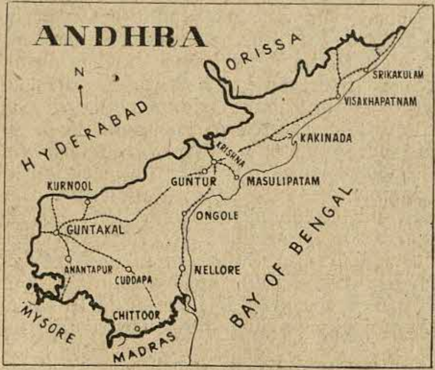
STATES IN INDIA

ANDHRA

Capital ..	Guntur	*Big Cities :*	
Population ..	20·51 million	Guntur ..	125,255
Language ..	Telugu	Visakhapatnam ..	108,042
Area ..	62,400 sq. m.		

The setting up of Andhra State by October 1, 1953 and the introduction to that effect had been announced by Mr. Nehru in the House of the People on March 26, 1953. The State came into being under the Andhra State Act, the principal provisions of which were as follows—

(1) The State of Andhra comprising the undisputed Telugu-speaking areas of Madras State, but excluding the city of Madras, would consist of the districts of Srikaikulam, Visakhapatnam, East and West Godavery, Kishna, Guntur, Nellore, Kurnool, Anantapur, Cuddapah and Chittoor and the smaller part of Bellary District, the remainder of which would be added to the Mysore State.



(2) Madras would be represented in future in the Council of States by 18 instead of 27 members and Andhra by 12 members.

(3) Madras would be represented in the House of the People by 46 instead of 75 members, Andhra by 28 and Mysore by 12 instead of 11.

(4) The number of Andhra Legislative Assembly would be fixed at 140 and that of Madras reduced from 375 to 230 and that of Mysore increased from 99 to 104.

(5) Andhra Legislature will have no Upper House. Membership of the Madras Legislative Council would be reduced to 51.

(6) Andhra High Court would come into existence on January 1, 1956, or on earlier date as fixed by the President.

(7) Assets and liabilities of Madras State would be divided between Madras, Andhra and Mysore in the proportion of 62·75, 36, 1, 25. President's decision on any dispute being final.

The new State lies between the latitudes of 13·50N and 19·80N and between the longitudes of 76·70E and 84·46E.

Andhra touches Orissa and Madhya Pradesh in the north and north-west, Hyderabad and Mysore in the west and residuary Madras State in the south; the whole of the east is bounded by the Bay of

Bengal. The length of the coast line is about 590 miles. The total area of the State is 62,400 sq. miles. The annual rainfall ranges from 20′ to 45′—55′. Almost parallel and adjacent to the east coast, run the Eastern Ghats which divide the coastal belt from western districts.

Andhra State comprises the seven coastal districts of Sri Kaikulam, Visakhapatnam, East Godavari, Krishna, Guntur and Nellore and four plateau districts of Cuddapah, Kurnool, Anantapur and Chittoor together with the Adoni, Alur and Royadurg taluks of Bellary district. With an area of 62,400 sq. miles, it is larger than the residuary State of Madras which is now 60,189 sq. miles. Its population according to the last census, is 20·51 million which is much smaller than that of the residuary State which has 35·73 million.

Minerals—Andhra is rich in mineral resources and, though no detailed geological survey has been attempted, it can be stated that new State has within its boundaries a variety of rock formations which yield several minerals like manganese, mica, farytes, limestone and gypsum. Manganese is mined in Visakhapatnam and mica in Gudur (Nellore district).

Forests—Forests in Andhra occupy 19 p.c. of the total area, which is higher that the residuary State (16 p.c.) and the Union of India (15 p.c.) The forests which clothe the inaccessible parts of the Eastern Ghats contain useful species of timber.

River Resources—The State is drained by the Godavari, Krishna and Pennar and their tributaries and their waters have been harnessed for irrigation of a third of the cultivated area. The remaining two-thirds depend on rain, which is both inadequate and undependable.

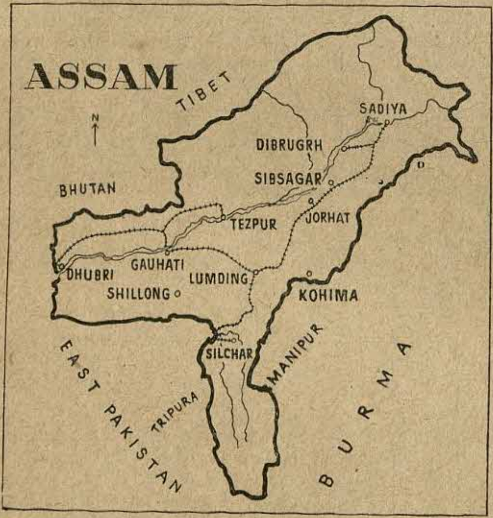
Agriculture—About 90 per cent of the cultivated area in Andhra is devoted to food crops like rice and millet and the total food production is estimated at 3·14 million tons. In matters of food, Andhra is certainly better placed than the residuary State where there will be a deficit of one million tons. The engineering achievements of the 19th Century led the foundation of the present prosperity of the Godavari and Krishna deltas. The Tungabhadra project, the Krishna-Pennar and several other irrigation projects will turn the new State into a vast granary for the whole country.

Industry—Andhra is backward in industry. Her largest industry—rice and oil-milling—is based on her agriculture. Her next important industry is sugar. The total mineral output is only 50,000 tons per year and the bulk of the mineral wealth still lies untapped. Nowhere is Andhra's industrial backwardness more apparent than in textiles. Though she has over 500,000 acres under cotton, she has only two textile mills.

ASSAM

Capital	.. Shillong.	Literacy ..	18·1 p.c.
Population	.. 9,043,707	Density of Pop. ..	176 per sq. m
Area (sq. m.)	.. 85,012		

This extreme north-eastern frontier State is almost bottled up between Bhutan and Tibet in the north, Burma on the east and East Pakistan on the west, areas of Manipur in the east and Cooch Bihar and Tripura on the west thrown in, except for a narrow passage bordering along and through Cooch Bihar. The 25 Khasi Hill States were merged with Assam on 26th January, 1950 to be known as Khasi-Jaintia Hill district and have added 6,027 sq. miles area. With the Khasi States, Assam continues to be governed through the Governor of Assam. Under the referendum, as qualified by the Radcliffe Award of 1947, the State has lost to Pakistan almost the whole of the district of Sylhet. This State has the largest number of tribal people of the Union constituting about 32 p.c. on the whole and about 12 p.c. in what were hitherto known here as the Excluded and Partially Excluded areas ; and the Constitution has provided for the setting up of "autonomous districts" and "autonomous regions" with District and Regional Councils for them.



Criss-crossed and skirted by hill ranges and forests, with the lower Himalayan ranges overlooking in the north, the territory has an abundant rainfall, normally about 100 inches, which with the maximum of 570 inches makes Cherrapunji the wettest spot in the world. This makes agriculture and plantation comparatively easy and worthwhile for the people and planters, rice and tea being the most important crops. In tea particularly she holds about half the acreage of the Indian Union. Sugarcane, cotton, jute, tobacco, rape and mustard and silk are also grown in small quantities. Her forest which occupy about 12·2 p.c. of the area, after years of unplanned denudation, yields large quantities of timber and other forest products and gives occupation to many. Among mineral resources, coal, petroleum and kerosene alone have as yet been exploited; the latent resources, which are said to be large indeed, being not even fully prospected. The climate of Assam is marked by coolness and extreme humidity. The heavy and long-continued rain keeps the temperature comparatively moderate. Assam enjoys an unusually long and bracing cold weather. The spell of hot weather is very short. Assam is always famous for its *fauna.* It is the home of elephants, tigers, leopards, wild boars, buffaloes, bisons, etc. The reserve forest at Khaziranga at Sibsagar keeps rhinoceroses. Mineral oil is produced at Digboi, near Tinsukia. Coal is produced at Margherita (near Digboi) and near Nazira.

The main cottage-industries of Assam are sericulture and hand-loom weaving. The two chief types of non-mulberry silk are *eri* and *Muga.*

Assam's Tribal People.—Assam has two zones of Tribal Areas namely :

(a) *The Autonomous Districts of Assam.*—United Khasi and Jaintal Hills, Garo Hills, North Cachar Hills, Lushai Hills, Naga Hills, Mikir Hills.

In the United Khasi and Jaintia Hills there are as many as 25 States which merged in Assam on the 26th January, 1950.

(b) *North-East-Frontier Agency* (35,000 Square miles)—consists of six districts—Se Lá Sub-agency, Subansiri, Abor Hills, Mishmi Hills, Tirap Frontier, Tuensang.

The Singphos (Kachins), Nagas, Kukis and Lushais occupy the Patkois—the Hills bordering upon Burma:

The Garos, Khasis, and Dimasas (or Hill Kacharis) occupy the hills between the Brahmaputra Valley and Sylhet.

The Mishmis, Abors, Miris, Daflas, and Hkama occupy the southern slopes of the Himalayas bordering on Tibet.

The Mikirs live in a range of low hills between the districts of Nowgong and Sibsagar.

The NEAF is the home of most vivile and hardy tribes ranging from fierce head-hunting Nagas to the simple Dafla. Eight to ten lakhs of people inhabit the Agency. The NEAF is a Centrally-administered area with the Assam Governor as the Agent of the Indian Government. The strategically important area bordering on China Burma and Tibet is ruled by the Governor through six political officers in the six different districts. Over them is the Tribal Adviser who is posted at Shillong.

Various dialects in which the people of the Agency speak belong to the Tibet-Burman group and Thai group of the Indo-Chinese languages. Other than Hkamtis almost all the tribes speak in dialects belonging to the Tibeto-Burman group. The Hkamti dialect belongs to the Thai group.

The Tribes living in this frontier zone are *Monpas, Sherdukpeus, Khowa, Miju,Dafla and Aka* in the Sela Sub-Agency; *Daflas and Apatanis* in the Subansiri Area; *Padam, Minyong, Gallong, Bokar, Bori, Pailibo, Tagin and Monpa* in the Abor Hills; *Miju, Digaru, Padam, Hkamti and Singpho, Kachin, Tangsa, Winchow, Hawa and Nokte* in the Tirap Frontier Tract; *Sangtam, Chang, Yimchungr, Konyak, Phom and Sema* in the Naga Tribal Area.

The Districts of Assam—United Khasi and Jaintia Hills, Naga Hills, Lushai Hills, Garo Hills, United Mikir and North Cachar Hills, Mishmi Hills, Abor Hills, Tirap Frontier Tract, Balipara Frontier

Tract, Cachar, Goalpara, Kamrup, Darrang, Nowgong, Sibsagar, Lakhimpur.

WEST BENGAL

Capital	.. Calcutta.
Population	.. 24,810,308
Area (sq. m.)	.. 30,775
Literacy	.. 24·5 p.c.
Density of Pop.	.. 806 per sq. m.

Big Cities :	
Calcutta	.. 2,548,677
Howrah	.. 433,630
Tollygunj	.. 149,817
Bhatpara	.. 134,916
Kharagpur	.. 129,636
Garden Reach	.. 109,160
Behala	.. 104,055

West Bengal has an area of 30,775 sq. miles or 36 p.c. of the area of the former province with a population of 24,810,308. Cut into two separate unconnected and Jalpaiguri is bound on the east by Bhutan, on the north by Sikkim, on the West by Nepal and Bihar and on the south by East Pakistan while the southern block is bound on the north and east by East Pakistan, on the south by the Bay of Bengal and on the west by Orissa and Bihar.

Compared with other States of India, West Bengal occupies ninth place in area and fifth in point of population. Except Travancore-cochin, the density of population in West Bengal is the highest in India—806 per square mile against 1015 of Travancore-Cochin. This density is highest in Calcutta (78,900 people per sq. mile) and lowest in Darjeeling district.

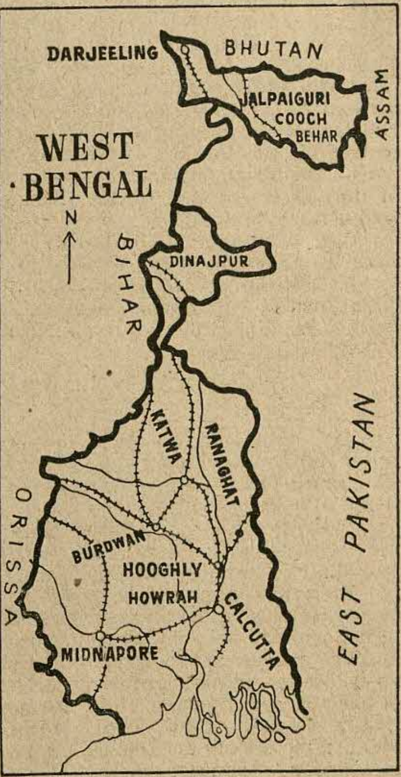
The only Indian State that has merged with West Bengal on the 1st January, 1950 is Cooch Bihar which adds 1,318 sq. miles to her territory.

This is one of the most densely populated states of the Indian Union, with 806 persons per sq. mile as per 1951 census, has a tropical climate, rainfall averaging from about 68 inches in the plains to above 120 in the hills. The State is particularly devoid of forests. Generally speaking, the forest region of West Bengal is situated in the isolated northern part of the State, *viz.*, Darjeeling and Jalpaiguri districts. Only about 8·66 p.c. of the area is covered by forests.

In agriculture which gives occupation to the majority of the people, she has the third largest area under rice in the Union, the second in tea and the first in jute; some amount of gram, barley, linseed, mustard and rape, sugarcane, maize, cotton, tobacco and other crops are also grown here. Of the total cropped area, 88 p.c. is utilised for growing rice. After rice jute is the most important crop and accounts for 10 p.c. of the total cropped area. Bengali tea plantations covers an area of 170,364 acres and it lies in the districts of Jalpaiguri and Darjeeling.

Industry and commerce are however the biggest source of income. At present West Bengal has 90 jute mills employing over 310,000 people. The capital invested in the trade is about Rs. 48 crores. Bengal accounts for one-fourth of all India's coal production. There are 32 cotton mills in the State located within 16 miles of Calcutta. West Bengal has also the largest number of paper mills of any state in India. West Bengal has the largest engineering industry in India representing approximately 75 p.c. of the total all India output.

West Bengal has two principal river valley projects for the improvement of agricultural economy, improved industrialisation. The first is Mayurakshi Reservoir Project. The work was begun in 1948. The river Mayurakshi originates from the uplands of Santhal Parganas in Bihar and falls into Bhagirathi after a course of 150 miles. At Massanjor in Santhal Parganas, the river flows through a narrow valley—an ideal site for a dam. So a multipurpose scheme was drawn up for irrigation, generation of power and flood control, with the first as the principal objective. The construction of the canal system was started in 1948, while the Dam was taken up in 1951. Tilpara barrage and the bendworks were completed by June, 1951. The Massanjor Dam will be 112 ft. high above the bed level of the river.



The second principal river valley project is *Damodar Valley Project* undertaken jointly by West Bengal and Bihar with the help of the Central Government. This is a multi-purpose project which comprises eight storage chains with hydro-electric stations, two auxiliary plants with an installed capacity of 240,000 k.w. and additional thermal power station at Bokharo with an installed capacity of 200,000 k.w. The project will ultimately control the flooding of the Damodar which is notorious for its vagaries and destructiveness. Other important benefits will be irrigation, ample electric power and chief water transport.

West Bengal's cottage industry is also considerable, the most important of which is cotton weaving. Other industries are bell-metal, hand-made paper.

Regarding trade, over 40 p.c. of India's total sea-borne trade passes through Calcutta.

West Bengal has 2,462 miles of metalled and 2,652 miles of unmetalled roads. There are six routes of National Highways falling within West Bengal: Calcutta-Delhi National Highway, Calcutta-Bombay-Madras-National Highway, Bihar-Assam-National Highway and Calcutta-Bongaon National Highway. In addition to this, Calcutta's airport, Dum Dum is the largest in India. On an average take-offs and touch-downs total 85 a day with passengers over 700.

Regarding the population, Hindus form 78·44, Muslims 19·85 per cent of the total population. Unlike Bombay or Madras only one language dominates in the state. The number of persons speaking Bengali as their mother tongue is 84·6 p.c. of the total population. The number of persons speaking Bengali as a subsidiary language is 3·4 p.c. of the total population. The literacy according to 1951 census of West Bengal is 24·55 per cent—34·7 p.c. of the total male population and 12·7 p.c. of the total female population. Percentage of literacy of Calcutta is 53·12. In 1951 there are 114 towns. There are seven cities in West Bengal each with a population of over 100,000 persons. They are Calcutta, Howrah, Tollyganj, Bhatpara, Kharagpur, Garden Reach, South Suburbs (Behala).

Districts of West Bengal—Burdwan, Birbhum, Bankura, Hooghly, Howrah, Midnapur, Calcutta, 24-Parganas, Murshidabad, Darjeeling, Nadia, Malda, Jalpaiguri, West Dinajpur, and Cooch Bihar.

BIHAR

Capital	Patna.
Population	40,225,947
Area (Sq. m.)	70,330
Literacy	12·2 p.c.
Density of Pop.	572 per sq. m.

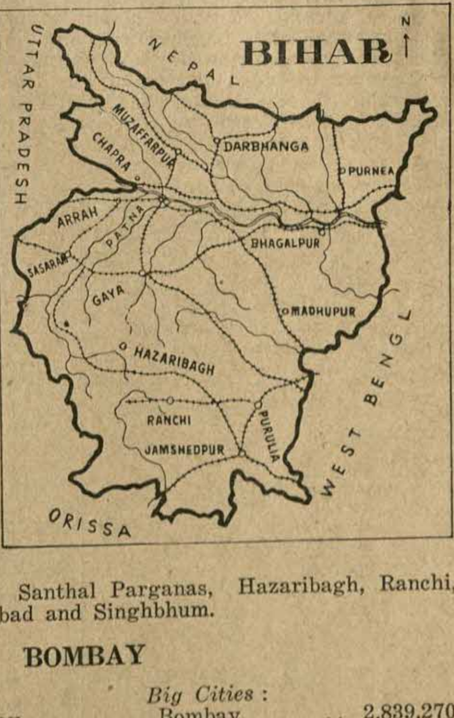
Big Cities :

Patna	283,479
Jamshedpur	218,162
Gaya	133,700
Bhagalpur	114,530
Ranchi	106,849

Bihar is bounded on the north by Nepal, on the east by Bengal and East Pakistan, on the west by the Uttar Pradesh and Madhya Pradesh and on the south by Orissa.

A more or less dry region, her rainfall averages about 48 inches in Bihar proper and 53 inches in Chota Nagpur which is a hilly and wooded tract and which mainly accounts for her having about 15 p.c. of her total area under forests. Agriculture is the basic occupation of the people. Bihar has the second largest area of the Union under rice, sugarcane, barley and maize, the third in linseed, rape and cotton, sesamum, castor-seed and tea are also grown in small quantities. Bihar however, accounts for 60 p.c. of the lac produced in India. The Chota Nagpur Division which produces most of it, is also the richest in India in mineral resources. Coal, iron, mica, managanese, chromite, lead, nickel, copper, saltpetre and asbestos are already mined in the State, other resources being as yet unprospected. Bihar has one of the largest cigarette factories in the world at

Monghyr and Tata Iron & Steel Works at Jamshedpur is one of the largest in the world. Bihar already accounts for 78 p.c. of the pig iron and 87 p.c. of the steel ingot production of India. Bihar is one of the most important areas for white sugar production, some 23 per cent of the total production of white sugar is being produced in Bihar. Besides the Ganges and other rivers which are a good system of communication in the interior, the State has a considerable mileage of railway, besides 1,152 miles of national highways, 4,700 miles of surfaced roads and about 28,000 miles of unsurfaced roads.



Districts of Bihar—Patna, Gaya, Sahabad, Saran, Champaran, Muzaffarpur, Darbhanga, Bhagalpur, Monghyr, Saharsa, Monghyr South, Purnea, Santhal Parganas, Hazaribagh, Ranchi, Palamau, Manbhum, Dhanbad and Singhbhum.

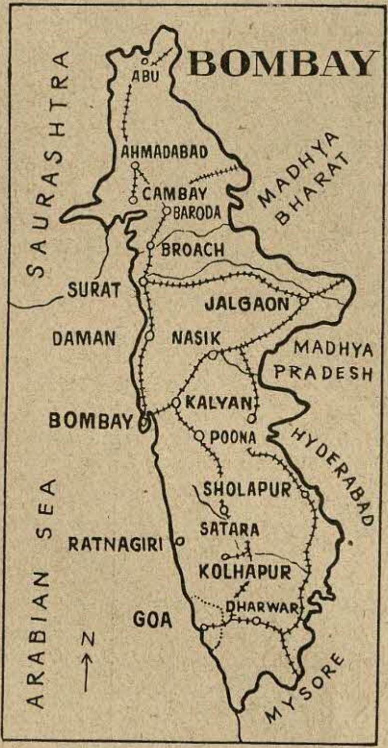
BOMBAY

Capital	Bombay.
Population	35,956,150
Area (sq. m.)	111,434
Literacy	24·6 p.c.
Density of Pop.	323 per sq. m.
Provincial Languages	Gujurati, Marathi, Kannada

Big Cities :	
Bombay	2,839,270
Ahmedabad	788,333
Poona	480,982
Sholapur	266,050
Surat	223,182
Baroda	211,407
Kolhapur	136,838
Hubli	129,609

Bombay stretchs along the western coast of peninsular India, with the 176 odd states merged with it in 1948 and 1949. Bounded on the west by the Arabian Sea, Saurashtra and Kutch, she has Rajasthan on her north, Madhya Bharat, Madhya Pradesh and Hydrabad on the east and Mysore and Madras to the south.

A wide diversity exists in the soil and climate of the State from the north to the south, average rainfall in the north being above 30 inches, with about 30 inches in the south and above 100 inches in the middle. Agriculture the occupation of the majority of the people, naturally varies. On the whole, Bombay has the largest area of the Union under jowar and bajra, second in cotton and tobacco, third in groundnut and produces considerable quantities of rice, wheat and ragi and small quantities of maize, barley, gram, sugarcane, and oil-seeds. The forest tracts of the State which constitute about 16 p.c. of the area move along with the Western Ghats, Satpura Hills and the Vindhya ranges. While bauxite, manganese and glass-sand are the only minerals that are being worked in sufficient quantities, other resources are also known to exist and await prospecting.



Industry and commerce flourish greatly in this maritime state, the number of registered factories here being the largest in the Union. In cotton textile industry for example, Bombay is responsible for more than 50 p.c. of the production of the country. Bombay is the leading cotton textile centre not only of India but of the world. Out of 416 textile mills in India, 209 mills are located here. On another side, the State handles about 52 p.c. of the value of the import trade of India and about 18 p.c. of the export trade. In addition, she enjoys a large volume of coastal trade. Except in the south, the communications of the State are good with about 3000 miles of railways and about 13,000 miles of surfaced roads.

Indian States merged with Bombay—Balasinor, Bansda, Baria, Cambay, Chota-Udaipur, Gad Boriad, Dharampur, Jawhar, Lunawada, Rajpipla, Sachin, Sant, Idar, Radhanpur, Vijaynagar, Danta, Palanpur, Sirohi, Jambughoda.

Bombay Districts—Ahmedabad, Broach, Panch Mahals, Kaira, Surat, Thana, Greater Bombay, Ahmednagar, East Khandesh, West

Khandesh, Nasik, Poona, Sholapur, Belgaum, Bijapur, Dharwar, Kanara, Kolaba, Ratnagiri, Dangs, Satara North, Satara South, Kolhapur, Banaskantha, Sabarkantha, Mahsana, Baroda, Amreli.

Major Cottage Industries—Textile (cotton), Textile (wool), gold and silver thread, fibre, tanning and leather working, carpentary wood-working etc., bamboo and cane-work, pottery, Bricks, Tiles etc., Gur, Vegetable oils, crafts.

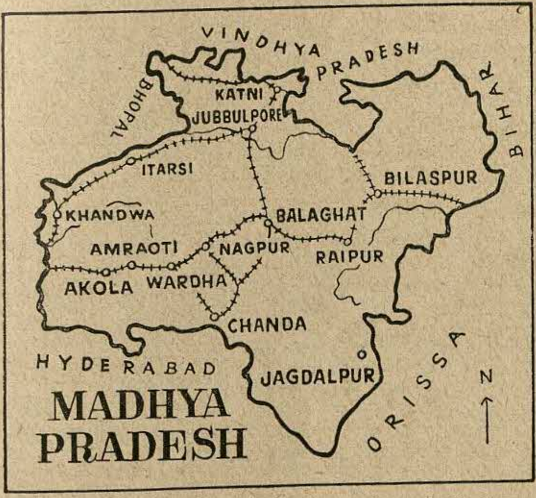
Major Irrigation Projects—Gangapur Storage Project, Kakrapara Project.

Major Power Projects—Khopoti, Bhivapur, Bhira.

MADHYA PRADESH

Capital	.. Nagpur.	Literacy	.. 13·5 p.c.
Population	.. 21,247,533	Density of Pop.	.. 163 per sq.m.
Area (sq. m.)	.. 130,272		
Languages	.. Hindi, Marathi, & Ghondi	*Big Cities :*	
		Nagpur	.. 449,099
		Jabalpur	.. 256,998

Madhya Pradesh, the biggest State in India in size, is situated in the heart of India with an area of 130,272 sq. miles and a population 21,227,533 in 1951 and is surrounded on the north by Madhya-Bharat, Vindhya Pradesh, the Uttar Pradesh and Bihar on the south-east by Orissa and on the south-west by Hyderabad and Bombay. Fifteen states have merged with her in 1947.



The State is rich in mineral resources. The chief mineral resources consist of coal, iron, manganese, bauxite, limestone, ceramic and other clays. Coal in the extremely worked mineral in the State but in quality it is of inferior variety as compared with Bihar or Bengal coal. Iron ores are widely distributed throughout the State. The State is very rich in manganese deposits. India is the second largest producer of manganese in the world and Madhya Pradesh produces nearly 60 p.c. of the total Indian output. Balaghat, Nagpur, Bhandara, Chhindwara and Jabbalpur contain deposits of manganese.

Madhya Pradesh's river systems: Narmada, Tapti, Wardha, Wainganga and Indravati lend themselves admirably to multi-purpose development schemes, yielding large blocks of power and capable of bringing vast tracts under irrigation.

Placed in an arid region, the rainfall averages on the west about 46 inches, on the south-west just about 30 inches and on the east about 50 inches. Among the States in the Union, she stands fourth in rice, wheat and sesamum, while growing among other things sugarcane, bajra, ragi, maize, tobacco, groundnut and other oil-seeds. Her forest tracts, with an area a little less than 20 p.c. of the total, are rich in timber and other forest produce including lac.

One fifth of the population of Madhya Bharat consists of aboriginals. They spread over different points of the State—south of the Vindya plateau, Districts of Chhindwara, Mandla and the uplands of Balaghat and also in the plain districts of Nagpur, Berar and Chhatisgarh. They are diverse tribes—the Ghonds (being the most numerous), the Korwas, the Parjas, the Marias, the Baigas, etc. Different dialects and varied habits are noticeable in the lives and customs of these people, but all of them are a set of unsophisticated lot, mostly living in agriculture, while some, like Korwas of Sanna hunt for their food. In the midst of grandeur of the hills and forests the tribes have developed great taste for colour, music and dance.

Hindi prevails in the north and the east, Marathi in Berar and west and centre of the State. Hindi is spoken by 56 p.c. and is the *lingua franca* of the State, Marathi by 31 p.c. and Gondi by 7 p.c.

Indian States merged in M.P.—Makrai, Bastar, Surguja, Changbhaker, Chuikhadan, Kawardha, Khairagarh, Nandgaon, Sakti Sarangharh, Kanker, Korea, Raigarh, Jashpur, Udaipur.

Districts—Nagpur, Wardha, Chanda, Chhindwara, Betul, Jabalpur, Saugor, Mandla, Hoshangabad, Nimar, Bilaspur, Drug, Bhandara, Balaghat, Amraoti, Yeotmal, Akola, Buldana, Raipur, Bastar, Raigarh, Surguja.

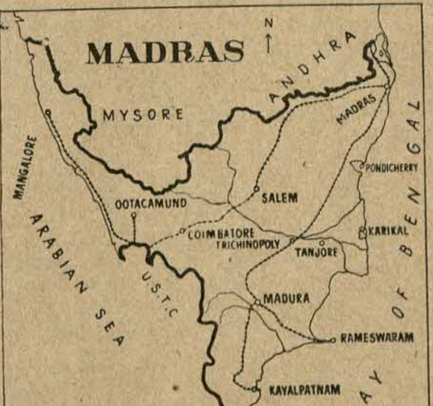
MADRAS

Capital	.. Madras	Languages	.. Tamil, Kanarese, Malayalam.
Population	.. 57,016,002	Library	.. 19·3
Area (sq. m.)	.. 127,790	Density of Pop.	.. 446 per sq.m.

Big Cities :

Madras	1,416,056	Vijayawada	158,724
Madurai	361,781	Mangalore	117,083
Tiruchirapalli	218,921	Vellore	106,024
Salem	202,335	Rajamundry	105,276
Coimbatore	197,755	Tanjore	100,680

The State of Madras is the southernmost State of the Indian Union. Extending from Cape Comorin in the south to Andhra State in the north-east and North Canara of the Bombay State in the north-west. This State lies between the Bay of Bengal and the Arabian Sea and covers large part of South India. Including three States (Pudukottai, Sandur and Baganapalle) merged in it, the area of the Madras State including Andhra was 127,790. The population according to 1951 census is 57,016,002 including Andhra.



Along the whole length of the western coast run the Western Ghats averaging 4,000 and rising to 8,000 ft. The only break is the Palaghat Gap in Malabar, 16 miles wide. Down the Eastern coast sweeps the chain of Eastern Ghats usually about 2,000 ft. in height; on their way southwards these ranges eventually meet and at a point of junction *i.e.*, a striking upheaval known as the Nilgiri hills.

The three great rivers of the State are the *Godavari*, *Kristna* and *Cauvery* and the less important rivers are *Pennar*, *Ponnaiyar* and *Thambraparni*.

The population of the State speaks mainly three languages such as *Tamil*, *Malayalam*, *Canarese*. Telagu speaking districts have been formed into a separate state called Andhra.

The principal commercial crops of the State are groundnut, cotton, sugarcane, gingelly, cocoanut, tapioca and castor arranged in a descending order of importance with reference to area. The staple food crops of the State are paddy, millets, pulses, onions, potatoes, sweet potatoes, tapioca and plantains.

The chief mineral productions f the State are mica, limestone, berytes, china clay, gypsum, magnesite and bauxite which make a good contribution to India's mineral exports.

The most important industries of the State are textiles, engineering, sugar, tobacco, matches, oil milling, bricks and tiles, cement, lime, potteries, tanning, ginning and pressing. South India is noted for tanning industry. The State exports to the foreign markets hides and skins valued at more than 11 crores of rupees per annum. Other industries, both perennial and seasonal include hosiery, silk mills, woollen mills, foundries, iron and steel mills, tea and coffee breweries, rice mills, bones and manures, chemicals, oil mills, paints, soaps, paper mills, printing, bricks and tiles, glass, saw mills, rope works.

Power Projects—(*i*) Muchukund Hydro-electric Scheme, (*ii*) Pykara Electric Scheme, (*iii*) Moyar Hydro-electric Scheme, (*iv*) Madras Thermal Scheme, (*v*) Nellore Thermal Scheme, (*vi*) Papanasam Electric System, (*vii*) Mettur Hydro-electric Scheme (*viii*) Tungabhadra Electric System, (*ix*) Vijayawada Thermal Scheme, (*x*) Visakhapatnam Thermal Scheme.

Irrigation Projects—(*i*) Mettur Project, (*ii*) Lower Bhavnani Project, (*iii*) Malampuzha Project, (*iv*) Karihirapuzha Project, (*v*) Perur Reservoir, (*vi*) Rollapad Scheme, (*vii*) Krishna Delta Drainage, (*viii*) Bhaira-vanitippa Project, (*ix*) Manimuthar Project, (*x*) Araniar Project, (*xi*) Walayar Project, (*xii*) Mangalam Project, (*xiii*) Coringa Island Project.

Four Major Irrigation Schemes—(*i*) Tungabhadra Project, (*ii*) Lower Bhavnani Project, (*iii*) Krishna Pennar Project, (*iv*) Ramapadasagar Project.

Main Industries—(1) Textiles, (2) Sericulture, (3) Sugar, (4) Oil miling, (5) Vanaspati, (6) Soap, (7) Tiles, (8) Matches, (9) Cement, (10) Chemicals and Fertilisers, (11) Glass, (12) Film Industry.

Main Cottage Industries—(1) Handloom Weaving, (2) Brass wares, (3) Palmyra Jaggery Products, (4) Coir goods, (5) Pottery, (6) Mats, (7) Umbrella, (8) Khadi, (9) Stone utensils, (10) Matches, (11) Alluminium wares, (12) Lace works, (13) Glass Bangles, (14) Wood carving, (15) Slates, (16) Ivory works, (17) Leather goods and leather tanning.

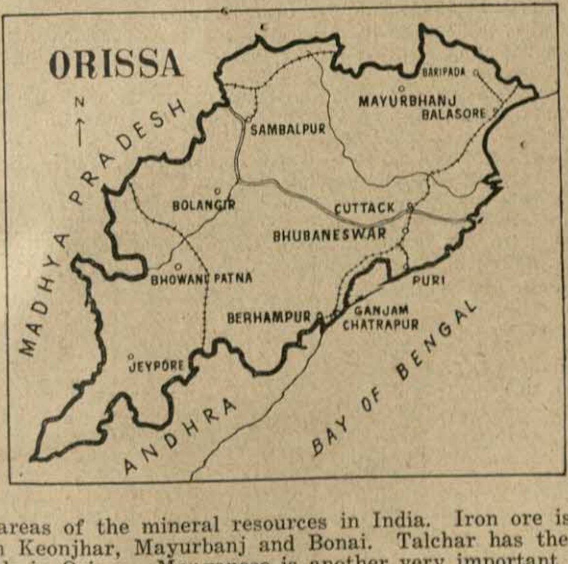
Indian States merged with Madras—Ramdurg, Savanur, Pudukottai, Baganapalle.

ORISSA

Capital	.. Bhubaneswar.	Literacy	.. 15·8 p.c.
Population	.. 14,645,946	Density of Pop.	.. 244 per sq. m.
Area (sq. m.)	.. 60,136		
Language	.. Oriya	*Big City* :	
		Cuttack	.. 102,505

Orissa State on the east coast of India placed between Andhra and Bengal to her south-west and north-east, is bounded by Bihar and Madhya Pradesh on the north and west and faces the Bay of Bengal on the south. Reconstructed as a distinct unit in 1936 and with the 24 eastern states merging into her in 1948 and 1949, she has an area of 60,136 sq. miles with a population of 14,645,946 according to 1951 census, which is 4·1 p.c. of India's population. It forms 4·7 per cent of the total area of India (including Kashmir). The density per square mile is 244.

An area of non-extreme climate, she enjoys about 57 inches of rainfall normally on the average and agriculture, the principal occupation here, depends wholly upon it except in the Mahanadi delta. Rice is the principal crop here although, jute, ragi, sugarcane, turmeric, oilseeds, jowar and maize in considerable quantities and pulses, coffee, tobacco and cotton are also grown. Fishing, particularly in the Chilka lake, and silk growing are important occupations. Her large tracts of forests, which occupy 12,965 sq. miles particularly in the north and the west, form an important source of income. Of her mineral resources, considerable quantities of high grade iron ore, as well as large quantities of coal, manganese, mica and lime-stone have already been located and are worked with the result that she supplies at present 60 p.c. of the iron ore consumed in India. Indeed her north and north-west areas are one of the richest areas of the mineral resources in India. Iron ore is mostly found in Keonjhar, Mayurbanj and Bonai. Talchar has the largest coal fields in Orissa. Manganese is another very important mineral. They are found in Koraput Raipur area. Dolomite limestones occur in large quantities in Gangpur State. Awaiting the harnessing of the Mahanadi, she is as yet backward in industry, producing in the main only paper, and sugar in small quantities. Handloom industry is by far the most universal industry in Orissa. The brass and bell-metal industry has also reached high order. Filigree and horn industries are the two of the principal cottage industries of Orissa. Orna-



ments of various kinds are made and they possess a high degree of workmanship and finish. Horn industry is also an indigenous cottage industry of the State. Some 30 varieties of articles are made from the horns. Mainly rural, her communications are proverbially backward, with 12,742 miles of roads and 783 miles of railways.

Orissa has now a hydro-electric scheme popularly known as *Duduma Project* and the *Hirakud Multi-purpose Project*. The Duduma Project (also known as Machkund hydro-electric project) is located in the Machkund river which for a part of its length forms the boundary between Orissa and Madras. There is a high waterfall at Duduma which is helping for the developing of the scheme. The installation is expected to be 100,000 k.w. The Government of Madras are proceeding with the scheme on behalf of both the governments in view of the greater demand at present in Madras and for greater necessity there. The Hirakud Scheme is being constructed consists of a dam across the Mahanadi, some 15,700 ft. long with two earnthen dyllas on either side of the main dam which will be approximately 34,500 ft. long on the right bank and 27,000 ft. on the left bank. The total installed capacity is expected to the 350,000 k.w. of which 123,000 k.w. will be installed, the rest being installed as load develops.

Bhubaneswar is now the new capital of Orissa. The foundation stone was laid by the Prime Minister of India on 13th April, 1948.

The Districts of Orissa—Cuttack, Balasore, Puri, Sambalpur, Ganjam, Koraput, Dhankannal, Keonjhar, Phulbani, Bolangir, Sundargarh, Kalakandi, Mayurbhanj, Ganjam Agency.

Indian States merged with Orissa—Patna, Aligarh, Athmalik, Khandpara, Rairakhol, Ranpur, Bamra, Daspalla, Hindol, Narsingpur, Nayagarh, Nilgiri, Pallahara, Sonepur, Talchar, Tigiria.

PUNJAB

Capital	.. Chandigarh.
Population	.. 12,641,205
Area (sq. m.)	.. 37,378
Literacy	.. 16·1 p.c.
Density of Pop.	.. 338 per sq. m.
Language	.. Panjabi & Western Hindi

Big Cities :

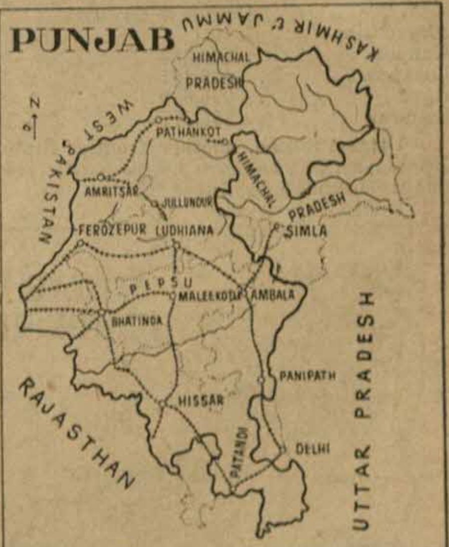
Amritsar	.. 325,747
Jullundur	.. 168,816
Ludhiana	.. 153,795

The Punjab, one of the new north-west territories of India, is bound on the west by Pakistan, and Rajasthan, lying on the south and South-west on the north by Kashmir, a block of the Himachal Pradesh and Tibet, and on the east by Himachal Pradesh and Uttar Pradesh. Including three tiny states merged into her in 1948, she has a total area of 37,378 sq. miles with a population of 12,641,205.

Punjab now includes Jullundar and Ambala Divisions and Amritsar District of Lahore Division and part of Gurdaspur and Lahore Districts. Altogether it contains 13 districts as compared to 29 in the old undivided Punjab. The two main languages of the State are

Punjabi and Western Hindi. In hosiery industry, Punjab occupies a premier position in the whole of India. Blankets, rugs, cycle parts, utensil making, tanning and wood industries are the principal cottage industries.

An arid territory with extreme climate, her rainfall averages annually about 23 inches only. Irrigated by the Beas, the Sutlej and the Chenab rivers in the north and supplemented by canals, she has the second largest wheat and gram area in the Union, third in barley, and maize, fourth in bajra and sugarcane, while producing considerable quantities of jowar, cotton, rice, rape and mustard and small quantities of tea, tobacco, groundnut and linseed among other things. She is particularly devoid of forests, the total area under forests coming to about 3·3 p.c. only. Of mineral resources too, anything except slate and bauxite has yet to be discovered. Wool rearing and handloom weaving, the latter particularly, are important occupations. On the other hand while she possesses about 66 p.c. of the woollen textile factories and produces some quantity of paper, cotton, textiles, starch and chemicals and some metal works, she is as yet backward in industry.



The major irrigation and power projects—(1) Uhal River Hydro-Electric Project, (2) Bhakra-Nangal Irrigation-cum-Power Project.

Main Industries—(1) Handloom weaving and spinning, (2) Hosiery, (3) Metal works, (4) Pottery.

The new capital of the Punjab is being built at Chandigarh and a team of foreign experts is evolving architectural designs best suited to Indian traditions.

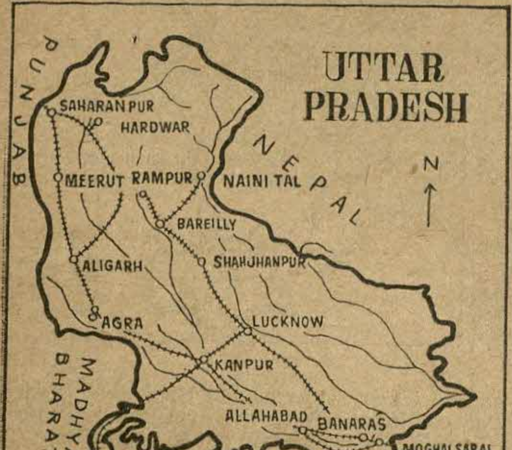
Districts—Ambala, Amritsar, Ferozepur, Gurgaon, Gurdaspur, Hissar, Hoshiarpur, Jullundar, Kangra, Karnal, Ludhiana, Rhotak, Simla.

Cottage Industries—cotton,, wood and silk spinning and weaving, carpet weaving, pottery, wood carving, inlaid work and lacquer work, ivory carving, utensil making, sports goods.

UTTAR PRADESH

Capital	Lucknow.	Allahabad	332,295
Population	63,215,742	Meerut	233,183
Area (sq. m.)	113,403	Bareilly	208,083
Literacy	10·8 p.c.	Moradabad	161,854
Density of Pop.	557 per sq. m.	Saharanpur	148,435
Language	Hindusthani (*Hindi & Urdu*)	Dehra Dun	144,216
		Aligarh	141,618
Big Cities :		Rampur	134,277
Kanpur	705,383	Gorakhpur	132,436
Lucknow	496,861	Jhansi	127,365
Agra	375,665	Mathura	105,773
Banaras	355,777	Shahjahanpur	104,835

Uttar Pradesh, another frontier State along the foothills of the Himalayas, has common borders with Tibet and Nepal in the north, and is bounded by Bihar in the east, Himachal Pradesh, Punjab Rajasthan and Madhya Bharat in the west and Vindhya Pradesh and Madhya Pradesh in the south. Including Tehri-Garhwal, Rampur and Banaras States merged into her in 1949, she has a total area of 113,403 sq. miles with a population of 63,215,742.



With a dry and extreme climate, her rainfall averages below 40 inches. The deficiency however, is partly made up by the Ganges, the Jamuna and their canals making the basic occupation agriculture more or less profitable. Uttar Pradesh in one of the best-watered States of India. The climate on the whole is cooler and drier than that of West Bengal, though in hot weather, the heat is fiercer in the plains. U.P. is only just within monsoon region and rainfall consequently is not so heavy as it is in further east. Compared to the other States in the Union, she thus stands first in her area under wheat, maize, barley, gram sugarcane and sesamum, second in bajra, linseed and rape and mustard besides producing considerable amounts of rice, jawar and small quantities of ragi, cotton, groundnut, tea and tobacco. She is besides the only opium producing area in the Union. Her forest areas as yet amount to about 13 p.c. of the total and are situated mainly at the foot of the Himalayas. Her mineral resources too have not been known to be very considerable; deposits of copper, slate, glass-sand, sandstone and steatite being alone located. This is indeed one of the few industrially advanced territories with some modern and large-scale and many old cottage industries, weaving, glass and metal-wares being the chief in the last category. She is particularly noted however, for producing about 60 p.c. of the total sugar of India and a large amount of leather and footwear, cotton and woollen textiles, paper and chemicals among other things. She has also one of the best communication systems in the country, so far as it goes, since very ancient times, with the longest railway mileage of all the units of the Union at present. Cottage and artistic industries abound in U.P. Embroidery work is done in Lucknow; in Banaras gold and silverwork is done on silk, velvet, crepe and georgette.

In glass industry U.P. stands first in India. Firozabad is the chief centre of manufacturing glass bangles in India. Moradabad is noted for its lacquered brass work, Agra for its durries and marble and alabaster articles.

Major Industries

1. Textile.
2. Sugar.
3. Wool.
4. Jute.
5. Leather.
6. Paper & Paper-boards.
7. Glass.
8. Rectified Spirit &
9. Oil.
10. Iron & Steel.
11. Chemicals & Drugs

Cottage and Small Scale Industries

1. Spinning & Weaving.
2. Leather.
3. Copper & Brass.
4. Lock & Cutlary.
5. Iron & Steel.
6. Glass beads and bangles.
7. Pottery.
8. Basket.
9. Fibre.
10. Gur.
11. Ghee.
12. Oil & Soap.
13. Wood Works.
14. Lace.
15. Carpet.

The State has the following Universities within it—Banaras Hindu University, Aligarh Muslim University, Allahabad University, Lucknow University and Agra University.

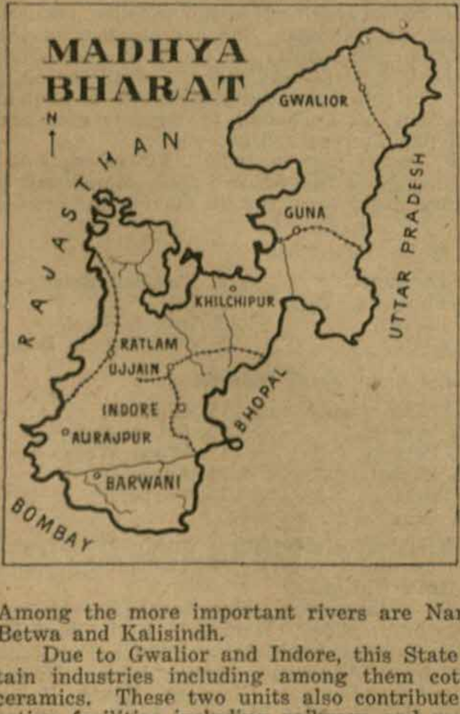
Districts—Dehra Dun, Saharanpur, Muzaffarnagar, Meerut, Bulandshahr, Aligarh, Mathura, Agra, Manipuri, Etah, Bareilly, Bijnor, Budaun, Moradabad, Rampur, Shahjanpur, Pilibhit, Furrukhabad, Etawah, Kanpur, Fatehpur, Allahabad, Jhansi, Jalaun, Hamirpur, Banda, Banaras, Mirzapur, Jaunpur, Ghazipur, Ballia, Gorakpur, Basti, Azamgarh, Deoria, Nainital, Almora, Garhwal, Tehri-Garwal, Lucknow, Unado, Rae Bareli, Sitapur, Hardoi, Kheri, Fyzabad, Gonda, Baraich, Sultanpur, Partabgarh, Barabanki.

MADHYA BHARAT

Capital	Gwalior (*Summar*) & Indore (*Winter*)
Population	7,954,154
Area (sq. m.)	46,478
Literacy	10·8 p.c.
Density of Pop.	171 per sq. m.

Big Cities :	
Indore	310,859
Gwalior	241,577
Ujjain	129,817

Madhya Bharat, containing within it 20 Central Indian States including the premier states of Gwalior and Indore, the remnants of the Marhatta Empire, is bounded by Rajasthan and Bombay in the north-west and west, the U.P. and M.P. in the north-east and east. With an area of 46,478 sq. miles and a population of 7,954,154 according to 1951 census, this State is in a comparatively dry region with a normal average rainfall of about 34 inches. The principal crops of the territory are wheat, jowar, gram, pulses, maize and cotton, rice, bajra, barley, sugarcane and oilseeds being also grown. Little or no survey of minerals, being made so far, the only resources that have come to notice are building stones and manganese.



Aravali, Vindhyachal and Satpura, the last two mainly are the chief mountain ranges in Madhya Bharat. Among the more important rivers are Narmada, Kasipra, Chambal, Betwa and Kalisindh.

Due to Gwalior and Indore, this State is very advanced in certain industries including among them cotton textiles, leather, and ceramics. These two units also contribute much of their communication facilities including railways and motorable roads. Linguistically, culturally, the region forms a compact block. The State was inaugurated on 28th May, 1948.

Manganese, asbestos, clay for ceramics, soap stone, lime stone, slate, shales and ochres are the main menerals available in Madhya Bharat.

The following States constitute the State of Madhya Bharat—Alirajpur, Barwani, Dewas (Senior), Dewas (Junior), Dhar, Gwalior, Indore, Jaora, Jhabua, Khilchipur, Narsingara, Rajgarh, Ratlam, Sailana, Sitamahu, Jobat, Kathiwara, Kurwai, Mathwar and Piploda.

Some distinctive features of this union are—

(*a*) For the purpose of the election of the Rajpramukh every ruler will have such number of votes as is equal to the number of lakhs in the population of his state.

(*b*) The present rulers of Gwalior and Indore will be the first Rajpramukh respectively during their lifetime.

c) Senior Uprajpramukh will also receive an appropriate allowance.

(*d*) The privy purse of the rulers of Gwalior and Indore has been fixed for the lifetime of the present rulers at a figure higher than the maximum fixed in other cases.

Main Cottage Industries—gold lace work of Chanderi and Maheshwar, wooden toys of Sheopur, blanket weaving at Mandswar and Manasa.

Places worth seeing are—Fort of Gwalior and Mandu (Dhar), caves at Bagh and Udyagiri, Mahakaleshwar Temple at Ujjain, Lake district of Shivapuri etc.

Districts of Madhya Bharat—Blind, Gird, Morena, Shivpuri, Guna, Mandsaur, Rajgarh, Shajapur, Ujjain, Ratlam, Bhilsa, Indore, Dewas, Dhar, Jhabua, Nimar.

RAJASTHAN

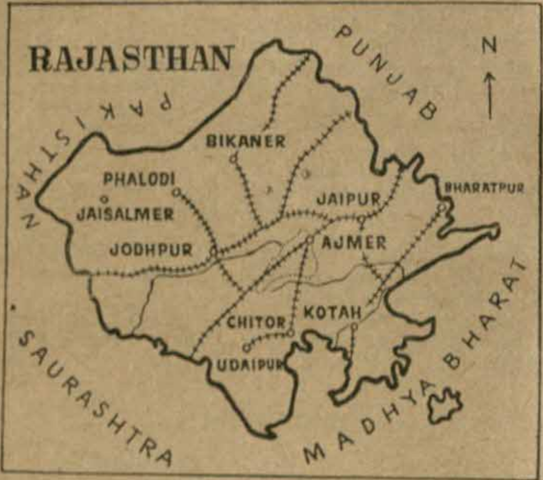
Capital	.. Jaipur.
Population	.. 15,290,797
Area (sq. m.)	.. 130,207
Literacy	.. 8·4 p.c.
Density of Pop.	.. 117 per sq. m
Language	.. Rajasthani & Hindi

Big Cities :

Jaipur	.. 291,130
Jodhpur	.. 180,717
Bikaner	.. 117,113

The integration of Rajputana States were completed in three stages. The Rajasthan Union was originally formed by the smaller Rajputana States in the South-east, namely Banswara (including Kushalgarh), Bundi, Dungarpur, Jhalawar, Kishengarh, Kotah, Partabgarh, Shahpura and Tonk. These nine States were united together to form United States of Rajasthan and was inaugurated on 25th March 1948. Subsequently the Ruler of Mewar expressed willingness to join Rajasthan Union. So Second Rajasthan Union with Mewar was inaugurated on 18th April, 1948. Further negotiation was initiated for the formation of a greater Rajasthan Union. As a result of these negotiaitons, a fresh covenant was signed providing for the integration of three major states of Rajputana *i.e.*, Jaipur, Jodhpur and Bikaner and the State of Jaisalmer with the former Rajasthan Union to form the United State of Rajasthan. The state was inaugurated on March 30th, 1949.

After this, the question of the integration of Matsya Union which was inaugurated on 18th March, 1948 consisting of the States of Alwar, Bharatpur, Dholpur and Karauli was taken up. An agreement was signed on 10th May, 1949 providing for the taking over by Rajasthan government the administration of the Matsya Union with the effect of May 15th, 1949.



Rajasthan is the biggest of the union states merged to form a State with 130,207 sq. miles of territory and a population of 15,290,797 according to 1951 census. Surrounded by Pakistan in the west and north-west, this State has Punjab, the U.P. and Madhya Bharat in her east and north-east Bombay, Saurashtra and Kutch to her south-west. Intersected almost from end to end by the Aravalli hills, the tract on the north-west of the hills is a sandy and ill-watered area with an average rainfall of about 13 inches while the tract to its south-west is comparatively fertile and has an average rainfall of 26 inches. The discovery of subsoil water in the Luni river in the near-desert zone promises to change the face of the earth in that region. Jowar, bajra, wheat, maize, barley, gram are the principal crops; certain amounts of cotton, sesamum, groundnut and rice being also grown. Among the known mineral resources of the State are, coal, copper, cobalt limestone, mica, gypsum, wolfram, zinc blend, marble, steatite, garnet and salt. The rocks of Rajasthan is rich in building material. Limestone is abundant. Fine-grained cryatalline marble and Jaisalmer marble are well-adopted for fine carving. Sandstone is plentiful almost everywhere, varying greatly in texture and colour.

Weaving, metal work, marble work and embroidery are the main cottage industries, a beginning in modern large scale industries like cotton textiles being only recently made. This big state has a total of about 30,000 miles of railway.

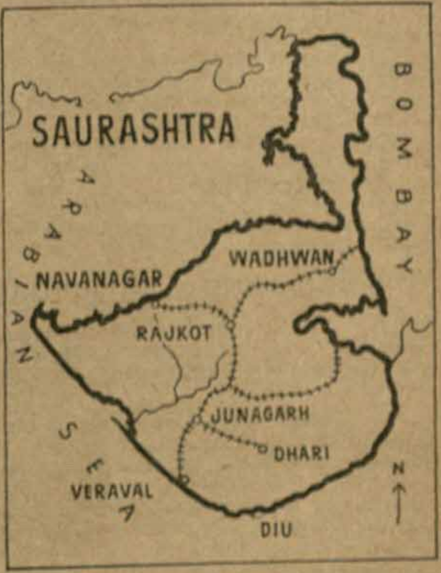
Districts of Rajasthan—Jaipur, Tonk, Sawai Madhopur, Bharatpur, Alwar, Sikar, Bhilwara, Jhunjhunu, Ganganagar, Bikaner, Churu, Jodhpur, Barmer, Jalore, Pali, Nagore, Jaisalmer, Udaipur, Dungarpur, Banswara, Sirohi, Chittorgarh, Kotah, Bundi, Jhalawar.

SAURASHTRA

Capital	.. Jamnagar.
Population	.. 4,137,359
Area (sq. m.)	.. 21,451 sq. m.
Literacy	.. 18·5 p.c.
Density of Pop.	.. 193 per sq. m.

Big Cities :

Bhavnagar	..	137,951
Rajkot	..	132,069
Jamnagar	..	104,419



Saurashtra has the unique position of being a union of as many as 221 States and Estates with varying territories and jurisdictions. Many of these States had several scattered islands of territories and added together these States divided the map of Kathiawar into about 860 different areas. The total area is only 21,451 sq. miles with a population of 41,37,359 according to 1951 census.

The State is surrounded almost on three sides by the Arabian Sea and the Gulf of Cambay, except the narrow territory between Kutch and Bombay going as far as touch Rajasthan. The climate is rather dry, the average rainfall being about 30 inches. Agriculture which is the principal industry, as elsewhere, produces principally jowar, bajra, wheat, cotton and oilseeds including groundnut, rice and sugarcane being produced in small quantities. The State has valuable teak and other forest tracts in most areas. There is a small pearl fishery off the cost of Nawanagar. The state is known to contain magnesium chloride, building and other stones, steatite, and a little of gold. Besides weaving and metal work as cottage industries, the State has the following principal industries—cotton textiles, cement, ceramics, glass, match, oils, vegetable, silk and artificial silk, soap, sugar. Although communications of the State are comparatively good with railways and motorable roads a large trade is carried on by the sea.

Some of the distinctive features of the Saurashtra Union are as follows—

(*a*) There is a presidium consisting of the rulers of Nawanagar and Bhavnagar as permanent members and three other rulers elected from among the members of the Council of Rulers. Rajpramukh and Up Rajpramukh will be elected from amongst the members of the Presidium.

(*b*) A Joint Advisory Council of Ministers of Saurashtra and the Ministers of Bombay will be established for investigating and discussing subjects of common concern and making recommendations for the better co-ordination of policy and action with respect to such matters.

(*c*) There is a specific provision that Saurashtra and other Gujerati-speaking areas may be united to form an union on such terms and conditions as may be agreed by the Council of Rulers as well as Council of Ministers.

Main ports are *Bhavnagar*, *Bedi*, *Navalakhi*, *Veraval* and *Porbandar* studded on the coastline of Saurashtra. First three are all weather ports.

Districts with headquarters—Central Saurashtra (Rajkot), Halar (Jamnagar), Zalawad (Surendranagar), Gohilwad (Bhavnagar), and Sorath (Junagadh).

PATIALA AND EAST PUNJAB STATES UNION

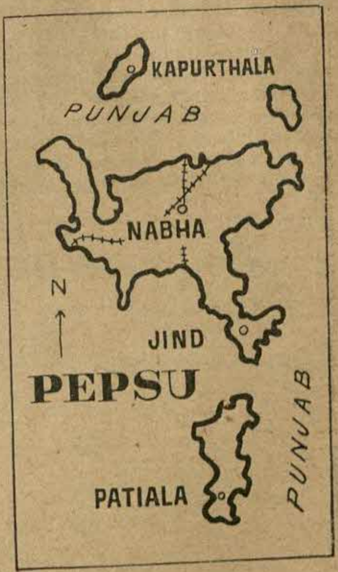
Capital	.. Patiala.	Literacy	.. 12·0 p.c.
Population	.. 3,493,685	Density of Pop.	.. 374 per sq. m.
Area (sq. m.)	.. 10,078 sq. m.	Language	.. Hindi & Punjabi

The Patiala and East Punjab States Union comprises eight States of Patiala, Kapurthala, Nabha, Jind, Faridkot, Malerkotla, Nalagarh and Khalsia and was inaugurated on July 15, 1948.

Except for Malergotla, whose Afgan rulers trace their history to the period of Lodis and Nalagarh whose rulers are Chandet Rajputs, the remaining six states have been known as Sikh States. Three of them—Patiala, Nabha and Jind are commonly known as the *Phulkian States* after the name of their common ancestor, Phul.

Linguistically, it is a bilingual unit. Mahendragarh and Kandaghat and a part of Sangrur district speak Hindi and the rest are Punjabi speaking.

The chief source of income in the State is agriculture which produces among other things gram, wheat, jowar, bajra, maize, sugarcane, cotton and tea. On the other hand, none except Patiala owns any railways, although the Indian railway lines cross this State at various places. Communication otherwise is not bad. Jats form the major part of the population who are regarded as first rate soldiers and finest peasants.



Next to agriculture, industry is the second most important occupation of the people. The main crops of the Union are wheat, gram, sugar-cane and cotton in the plains and potatoes in the hills. In addition, barley, oats, bajra, maize and other minor crops are grown. There are about 450 large and small scale industries scattered all over the States. There are two big sugar factories in Kapurthala State of the Union and also two big cement factories. The important cottage industries of the State are—gota kinari, handloom and hosiery, calico printing, cycle parts, desi shoes, woolen blankets, basket-making, bangles, sewing machine parts.

The Pepsu Government is a shareholder in the *Bakhra Dam* and its allied irrigation projects to the extend of 22 p.c. in the capital outlay. About 7 lac acres of land would be brought under irrigation by Bhakra canals. The Government is also undertaking independently the following projects—(1) *Ben River Irrigation Project*, (2) *Narnaul Bund Irrigation Project*, etc.

The districts of PEPSU—Patiala, Barnala, Bhatinda, Mohindergarh, Kapurthala, Sangrur, Kohistan, Fatehgarh Sahib.

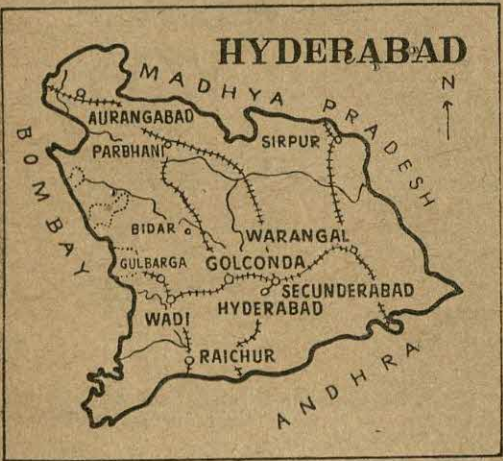
HYDERABAD

Capital	.. Hyderabad.	*Big Cities :*	
Population	.. 18,655,108	Hyderabad	.. 1,085,722
Area (sq. m.)	.. 82,168	Warangal	.. 133,130
Literacy	.. 9·2 p.c.	Languages	.. Telugu, Marhatta, Kanarese, Urdu
Density of Pop.	.. 227 per sq. m.		

Hyderabad, the biggest of the former Indian States, covering an area of 82,168 sq. miles is more than the area of England and Scotland put together and the area exceeds the Province of Bengal before partition. It has a population of 18,655,108 according to 1951 census. It is placed at about the centre of the peninsular India surrounded by M.P., Bombay and Madras. Hyderabad is the heart of the Deccan. It is roughly shaped like a diamond plus a triangle in the south-west corner. The State lies between the Godavari and its big left-bank tributaries on the one side and the Krishna and its big right-bank tributary on the other.

Hyderabad has a moderate rainfall of about 30 inches, most of which falls in the summer monsoon. The numerous rivers naturally irrigate a large part of the State. The black soil in the north-west grows wheat and cotton, in the south-east the soil is sandy and rice and millets are the chief crops. Gold is mined in the Hutti area.

The State possesses 9,455 sq. miles of forest.



As for the tourists, it contains Ajanta and Ellora caves which are famous for their frescoes, all over the world. Other interesting things are Bhadrachallam temple of Ramdas fame, the Darga of Khaja Bande Nawaz at Gulbarga.

The State has 25,052,000 acres under cultivation which includes paddy, wheat, jawar, groundnut and cotton. It has 1,764,000 acres under irrigation and 15,478 major and 16,418 minor tanks. It has also a total area of 12,539·25 sq. miles of forests (*i.e.*, 15·16 per cent).

As regards minerals, the State produces mica and graphite, coal, gold and diamonds. Coal is being mined at Tandu, Yellandu, Sasti and Kothagudam. Gold is being mined at Hutti in Raichur District. There are also abundant ceramic raw materials in Hyderabad. The building stones of Hyderabad are perhaps one of the most important and useful mineral assets of the state.

As regards industries, there are 765 large industrial establishments employing on an average 70,387 persons. The annual production of coal in the State is 10,45,383 tons. The State also produces sugar, paper, cement, power alcohol, glass, cigarettes.

The two well-known cottage industries of Hyderabad are *filigree* and *Himroo* industries. For delicate workmanship and beauty of design, the products of the former are unrivalled in India. Karimnagar of the Hyderabad State is noted for filigree work. The basic raw materials employed in this manufacture is pure silver. The types of products are ash trays, bangles, metal boxes, broaches, buttons, perfume-holders etc. The himroo fabric of Aurangabad enjoys a lasting reputation. The fabric is a nicely ornamented production with diversified colour schemes and includes other similar fabrics such as 'mushroo' 'kamkhab' 'susi' 'elaicha' etc.

Districts of Hyderabad—Hyderabad, Mahbulnagar, Raichur, Gulbarga, Bidar, Osmanabad, Bhir, Aurangabad, Parbhani, Nanded, Adilabad, Nizamabad, Medak, Karimnagar, Warangal and Nalgonda.

JAMMU & KASHMIR

Capital	.. Srinagar	Area (sq. m.)	.. 92,780
Population	.. 4,410,000	Language	.. Kashmiri, Urdu

Jammu and Kashmir, the northernmost State of India bordering on the USSR, Sinkiang and Tibet in the north and north-east and Pakistan on the west and South-west, has an area of 82,258 sq. miles. The altitude in the valley varies from 5,000 feet above the sea level. According to estimated population of 1950, the total population was 4·37 millions. Although acceding to India as early as October, 1947, the relationship of the State with India is governed by the special article 306-A of the Constitution of India.

The country is almost entirely mountainous, and it may be geographically divided into three areas: Tibetan and semi-Tibetan tracts in the north, containing the districts of Ladak and Gilgit; the middle region of the Happy Valley of Kashmir and the large level areas of Jammu in the south. This mountainous State covered on its north by snow for about half the year and with extensive rich forests in the valleys of the Chenab, the Jhelum and the Indus, has its chief crops in rice, wheat, maize, barley, oil seeds, cotton, tobacco and saffron. The State has also a large amount of fruits for export, principally walnuts, almonds, pears and apples. The mineral resources of the State as yet unexploited are large indeed including among them coal, zinc, copper, lead, bauxite, fuller's earth, slate, kaolin, asbestos, as well as gold and sapphiers. Her silk filature industry is the biggest in the world and equally famed are her shawls, carpets and wooden carvings.

Kashmir acceded to India on October 26, 1947. By the new constitutional set-up the office of the Maharaja has been eliminated from Kashmir and new Head of the State has been elected for a term of five years to be recognised by the President of India on recommendation of State Legislative Assembly. He holds office during the pleasure of the President and takes oath to preserve, protect and defend the constitution of the State.

The chief industries of the State are—silk, woollens, wood-carving, papier mache, carpet weaving, namda industry and gabha inductry. The gabha industry is localised in Anantanag 34 miles from Srinagar.

Most significant reform of Kashmir has been the abolition of landlordism by passing of the *Big Landed Estates Abolition Act* with the result that lands have now passed to tillers of the soil.

The land route begins from Pathankot, the railway terminus of Northern Railway. T he distance from Pathankot to Srinagar *via* Jammu is 267 miles. The first 64 miles upto Jammu are by a nicely metalled and tarred plain road and the rest leads through mountainous and picturesque scenery. The Indian National Airways Ltd., are operating passenger service between Delhi and Srinagar.

Tourist Traffic is one of the main sources of income both to the State and the people. About 50,000 people visit the place annually.

Kashmir is divided into three provinces—Jammu Province, Kashmir Province and Frontier Provinces (including Ladakhh).

The districts of Jammu & Kashmir—Jammu, Kathua, Udhampur, Reasi, Mirpur, Chenani Jagir, Poonch Jagir, Baramulla, Anantanag, Muzafforabad, Ladakh, Astore, Gilgit (Leased area), Gilgit Agency.

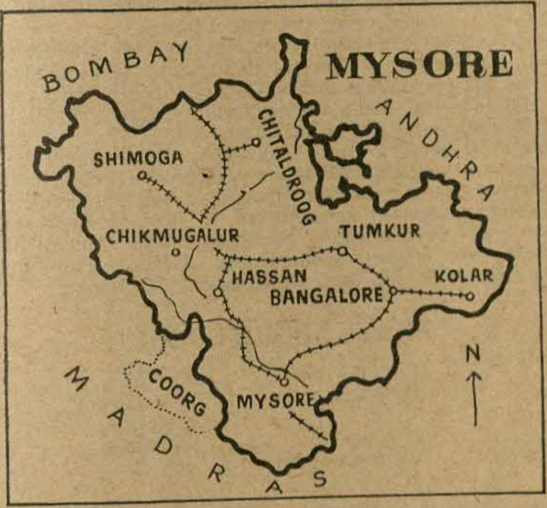
MYSORE

Capital	.. Bangalore.	*Big Cities* :	
Population	.. 9.074.972	Bangalore ..	778,977
Area (sq. m.)	.. 29,489	Mysore ..	244,323
Literacy	.. 20·3 p.c.	Kolar Gold Fields	159,084
Density of Pop.	.. 308 per sq. m.		

Mysore State is a table-land situated in the angle where the Western and Eastern Ghats converge into the Nilgiris. On the East, the South and the North, it is surrounded by the Madras State. On the West and the North-west, it is bounded by the districts of South Canara and Dharwar respectively, and towards the South-west by Coorg. The general elevation rises from about 2,000 feet above sea-level, along the northern and southern frontiers to about 3,000 feet at the central water-shed which separates the basin of the Krishna River in the North from that of the Cauvery in the South. It lies between North Latitude 12° and 14°; East Longitude 75° and 78°.

The area of the State is 29,489 square miles; the population: 90,72,000 (1951 census). Agriculture forms the main occupation of more than three-fourths of the population.

Physically, the State divides itself into two regions—the *'Maidan'* or plain country, comprising roughly the districts of Bangalore, Tumkur, Chitaldrug, Kolar, Mandya and Mysore, and the *'Malnad'* or hill country, comprising the districts of Chickmagalur, Hassan and Shimoga. Rainfall is heavy in the malnad tracts, and dense evergreen forests abounding in big game form their characteristic feature. The great part of maidan country is cultivated.


MYSORE

Industry—The State abounds in valuable natural resources and basic raw materials vital for the expansion of key industries of the modern type; and these resources have been systematically exploited and utilised for capital works of a productive nature calculated to enhance the prosperity of the people. Industries like the manufacture of iron and steel, cement, paper, sugar, cotton and silk, soaps, chemicals and fertilizers, sandalwood oil etc., thrive in the State. The only aircraft factory in India is situated in Bangalore. Mysore is the principal gold producing centre in India. The State is recognised as the pioneer in Hydro-electric development in India. Mysore produces most of the world's sandal oil. The development of rural and cottage industries has been a special feature of the policy of the Government in recent years. The Mysore Government is perhaps unique in the development of the Khadi industry as one of the State's activities, and to give it a place among the key industries. The State is devoting special attention to post-war planning.

Tourist's Paradise—From many points of view, the State is a Tourists' Paradise, with lovely cities, enriched by shrines and marvels of sculpture. Travel is easy and pleasing. The climate is salubrious. Communications by road as well as by railway are well maintained throughout the State. The State is well equipped with efficient hospitals, sanatoria and nursing homes.

Education—Special attention has been devoted to the expansion and development of education in all its aspects. The State now spends annually about Rs. 3 crores on education. Tuition is free for the Depressed Classes. Hindi is being taught as a compulsory subject in the High Schools and as a second language in the Middle Schools, the Intermediate and the B.A. Classes.

Administration—For administrative purposes the State is divided into nine Districts. The administration is carried on by the Maharaja as Rajapramukh and a Council of Ministers, which functions on the basis of joint responsibility. The Council consists of the Chief Minister and five other Ministers.

Legislature—Mysore State has been given under the Constitution a bi-cameral legislature, namely, Mysore Legislative Assembly and Legislative Council which consists of 100 Members. The State is also enabled, under the constitution, to send 11 Representatives to the House of the People and 6 Members to the Council of States.

Districts of Mysore—Bangalore,, Kolar, Tumkur, Mysore, Mandya, Chittaldrug, Hassan, Chickmaglur, Shimoga.

TRAVANCORE-COCHIN

Capital	.. Trivandrum.	*Big Cities* :	
Population	.. 9,280,425	Trivandrum	.. 186,931
Area (sq. m.)	.. 9,144	Alleppey	.. 116,287
Literacy	.. 46·4 p.c.	Language	.. Malayalam, Tamil
Density of Pop.	.. 1,015 per sq. m		

Travoncore-Cochin State, formed by the integration of the erstwhile Travancore and Cochin States on the 1st July, 1949, is the southernmost Indian State occupying the south-west portion of the Indian peninsula. It forms an irregular triangle with its apex at Cape Comorin bounded on the North and the East by the Madras State and washed in the west and south by the Arabian Sea, the Indian Ocean and partly by the Bay of Bengal.

A provision in the old covenant and now a part of the constitution relates to the administration of Devaswom (Maintenance of temples). It is an obligation on the part of the covenanting State of Travancore to contribute annually from its general revenue a sum of Rs. 50 lakhs towards the Devaswom. Out of this fund, Rs. 5 lakhs are to be contributed towards the expenditure of Sri Padmanavaswami Temple at Trivandrum (the deity of the ruling dynasty). Similarly, Cochin Devaswom Board administers the Devaswom estates and property in Cochin.

From the Western Ghats on the East, the country undulates with hills of dense vegetation while low level cultivated plains skirt the backwaters and the Arabian Sea to the west. The physical features of the land fall into three well-marked divisions: (1) the hilly tract marked by long spurs, extensive ravines and dense forests with gigantic trees providing valuable timber of every variety, including teak, blackwood, ebony, sandalwood, etc., with fauna including elephant, bison, tiger, cheetah, leopard, wild boar, ambhur, ibex, bear, deer, wolf, fox, monkey, etc., and innumerable varieties of snakes and birds (2) the plains intersected by numerous rivers and streams and (3) the coastal belt covered with dense cocoanut plantations and marked by picturesque backwaters forming a cheap highway for traffic.

The States has an area of 9,144 sq. miles (one-third being forest area) and a population of 9,280,425, the density of population being 1,015 per sq. mile. The percentage of population living in rural areas is 83·96 and that in the urban area 16·04. The sex ratio is 1,008 females to 1,000 males.

Malayalam is the mother-tongue of the majority of population there being 80,12,685 Malayalam speaking people. Next comes Tamil which is spoken by 11,52,141 persons. 46,395 persons speak Konkani, 23,742 Telugu, 5,899 Canarese, 4,654 Hindi, 4,476 Gujarati, 3,880 Marathi and 26,553 other languages.

With 53·76 p.c. literacy (64·47 for males and 43·23 for females) Travancore-Cochin leads other States in India in regard to education; 25 p.c. of the total revenue is now earmarked for education. More than 16 lakhs of the population of the State are school-going children. Another quarter of a lakh of youth receive instruction in colleges which alone number 45 including a Medical College, an Engineering College and an Ayurveda College. There is also a highly advanced library organisation in the State.

About 55 p.c. of the population depend on agriculture for their livelihood. Rice is the principal food crop of the State, tapioca coming second. Other sources of agricultural wealth are cocoanut, arecanut, tea, coffee, cardamom, rubber, pepper, ginger, lemongrass, sesamum, ground-nut, turmeric, etc.

The abundance of natural resources, the existence of numerous rivers and waterways providing easy access to factories, the availability of cheap electric power and above all, the unceasing efforts of Government to foster industrialisation, have contributed in no small measure to the high degree of industrial advancement attained by the State. By a careful harnessing of these natural resources in which both Government and enterprising businessmen have played no small part, quite a large number of industries of magnitude and variety like Minerals, Aluminium, Glass, Textiles, Ceramics, Paper, Plywood, Sugar, Fertilisers and Chemicals, Titanium oxide, Tiles, Matches, Cashew nuts, Engineering works, electrical goods, Rubber, Transparent paper and Rayons, coir mats and mattings, cement, etc., have sprung up in the State in recent times and today about seven hundred registered factories with about a lakh of employees make their mighty contribution to the national endeavour at production. Among the mineral resources of the State are ilmenite, zircon and thorium bearing monosite deposits (of considerable importance in the production of atomic energy), besides abundant supplies of graphite, mica and kaolin of exceptional quality.

The Coir Industry providing employment to about 5 to 6 lakhs of people, is the most important cottage industry in the State. Other important cottage industries are hand-loom weaving, palm-gur manufacture, oil crushing, ivory and wood carving, embroidery and lace work, bee-keeping, Khadi, Korea grass mat weaving, fibre mats, screwpine, pottery, etc. With a total number of 2,800 societies and aggregate working capital of Rs. 300 lakhs the cooperative movement has made steady progress in the State especially during the last few years and the reorganisation of the important cottage industries on co-operative basis are being undertaken with financial and other assistance from Government.

Districts of Travancore-Cochin—*Trivandrum, Quilon, Kottayam* and *Trichur.*

Under the Constitution the State has a Legislative Assembly consisting of 108 members elected on the basis of adult franchise and one member representing the Anglo-Indian community nominated by the Raj Pramukh. The State is represented in the House of People by 12 members and in the Council of State by 6 members.

Over 2,000 age-old temples (Ananthasayanam, Janardanam, Vaikom, Ettumanoor, Thiruwella, Aranmula, Kumarakoil, Suchindram, Kanyakumari, Trippunithura, Trichur, Pazhayannur, etc.,) have opened their portals to Hindus of every class. There are also a large number of old Churches and historical manuments.

The Padmanabhapuram Palace and the Nattancherry Palace contain examples *in situ* of the major arts of architecture, sculpture, wood-carving and mural painting. The Art Galleries at Trivandrum and Trichur house the finest collection of Asian paintings and exquisite specimens of arts and crafts. The Zoological Gardens, the Museum, the Observatory, the School of Arts, the Veli Boat Club and the Aquarium are among the other attractions of the capital.

Up in the hills, on the shores of the Periyar Lake, is the Royal Game Sanctuary, India's National Park, where wild life can be seen in its natural habitat.

Cape Comorin—the Land's End of India where the three oceans meet in eternal unity, the first rate Harbour at Cochin—a veritable romance of marine engineering, the growing industrial centres and the famous Hydro-Electric and Irrigation Projects in the State are places of unique attraction.

DELHI

Capital—Delhi
Population—1,744.072
Area (sq. m.)—578
Literacy—38·4 p.c.
Density of Pop.—3017 per sq. m.

Big Towns
Delhi—914,790
New Delhi—276,314

Delhi, the imperial city under many a dynasty in the past centuries, with its surrounding districts was constituted as a separate administrative unit for the seat of the Central Government of India in 1912. The seat of the Government was shifted since then to the new and modern city of New Delhi nearby. New Delhi is a city, Delhi is a district and Delhi is a State. This smallest State of the Union has an area of 578 sq. miles with a population of 1,744,072 in 1951. Placed 700 ft. above sea level and the focal point of all railways, she has an arid territory and an extreme climate. An enclave of territory in Punjab bordering on the U.P., her average rainfall is about 26 inches. For her small area, she produces a considerable amount of gram, wheat, bajra, jowar, barley and some amount of sugarcane, rape and mustard and tobacco. Besides cottage industries like jewellery, brass and copperwares, ivory work, pottery, weaving, gold and silver embroidery, famed of yore, in recent times modern factories have been set up for the production of cotton textiles, and chemicals among other things.

Under the terms of part C States Act passed by the Union Parliament in Sept. 1952, the Delhi has acquired the status of a state and ministry. The State Assembly functions in regard to such matters as public health, education labour, finance industry, trade and agriculture. There are many important subjects over which the Assembly will have no right of jurisdiction.

AJMER

Capital—Ajmer
Population—693,372
Area (sq. m.)—2,417

Literacy—20·1 p.c.
Density of Pop.—287 per sq. m.

Ajmer is a territory placed about the centre of Rajasthan, and with an area of 2,417 sq. miles and a population of 693,372 according to 1951 census. Only a little less dry than that the area to the west of her and covered with hills, the State is comparatively unsuitable for cultivation, yet producing jowar, bajra, wheat, barley, cotton and gram. Mica and marble are its main mineral resources and cotton textile the main factory industry. Communications are good with about 30 miles of railway, 68 miles of national highway. The metre gauge line of the Western Railway pass through the State.

Ajmer has been provided with a Legislative Assembly and Council of Ministers under the Part C States Act of 1951.

The Loco and Carriage workshops are the largest industrial works of the Western Railway in Ajmer.

COORG

Capital—Mercara
Population—229,405
Area (sq. m.)—1586
Literacy—27·2 p.c.
Density of Pop.—145 per sq. m.

Coorg, an enclave of 1,586 sq. miles of territory in south-west Mysore bordering on Madras, had a population of 229,405 in 1951. With about 35 inches of average rainfall and about 33% of her territory covered by rich forest, she produces principally coffee, rice, ragi, spices and tea. Approachable by railway, she has also 324 miles of surfaced and 61 miles of unsurfaced roads.

Coorg is essentially an agricultural state and chief crops here are rice, ragi, coffee, orange, cardamom, pepper and plantains. Tea and rubber are also grown in some parts of the State. Citrus and plantains are the two more important fruits in Coorg.

The State has got Legislative Council and a Council of Ministers under Part C States Act of 1951.

BHOPAL

Capital—Bhopal
Population—836,474
Area (sq. m.)—6,378
Literacy—8·2
Density of Pop.—122 per sq. m.

Bhopal, erstwhile a principal state of Central India and enclosed now between Madhya Bharat and Madhya Pradesh, has an area of 6,878 sq. miles with a population of 836,474 in 1951. Placed in a comparatively dry region with about 35 inches of annual rainfall, her arable land, good soil in the main, produces wheat, jowar, gram and pulses, rice, sugarcane, cotton and tobacco. The State forests also are extensive and valuable. And the main industries of the state are cotton textiles, match, sugar, strawboard and chemicals. Bhopal is also rich in such mineral deposits as iron, mica, and bauxite.

The agreement for merger was signed by the Ruler on April 30, 1949 and the State was taken over by a Chief Commissioner on behalf of the Government of India on June 1, 1949.

The State contains many remains of archaeological interest—principal of which is the world famous *Sanchi Topes* which date from the 2nd century B.C. Erected by Asoka the Stupa stands on the top of a small hill and is enclosed by the finest and oldest stone railing in India.

Bhopal is on the Central Railway main line between Bombay and Delhi.

Part C States Act of 1951 provides Bhopal with a Legislative Assembly and a Council of Ministers.

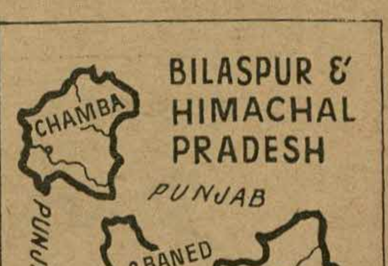
Districts of Bhopal—Sehore, Raisen.

BILASPUR

The State of Bilaspur which was under Central administration from 12th October, 1948 has been merged with Himachal Pradesh from 3rd November, 1953 for administrative purpose. It has an area of 453 square miles with a population of 12,60,99 according to 1951 census. It is now under the Lt. Governor of Himachal Pradesh who is now also the Chief Commissioner of the State.

HIMACHAL PRADESH

Capital—Simla
Population—983,367
Area (sq. m.)—10,451
Literacy—7·7 p.c.
Density of Pop.—94 per sq. m.



Himachal Pradesh, comprises the territories of 21 Eastern Punjab Hill States and their 9 tributaries nestling in the foothills of the Himalayas between Kashmir in the West and Uttar Pradesh in the East. It has an area of 10,451 sq. miles with a population of 98,33,67. Biggest of the merging States was Mandi. It was inaugurated on 15th April, 1948. Heavily wooden and assured of high rainfall, the State has two blocks, one to the west of Punjab bounded by the U.P. on the west and at the foot of the Himalayas and the other to the north of Punjab and bounded by Jammu and Kashmir. Wheat, maize, barley, rice, ragi, gram and sugarcane and potato are its principal crops, tea of small quantities being also grown. This State's forests contain the largest quantities of coniferous timber in northern India and they are the main source of revenue in the State. Potato is the chief cash crop.

Its main crops are maize, rice and potato besides fruits from its famous orchards. Communication is still very difficult throughout the territory and industry except in the cottage scale is relatively unknown.

Historically these States were founded by Rajput immigrants in the 14th and 15th centuries, who had sought these Himalayan retreats to preserve their cultural freedom. Their cultural tradition brought from Rajasthan greatly contributed to the creation of Kangra School of Art which marked a special phase of Indian painting which flourished between 1750 to 1850.

Part C States Act of 1951, provided the State with a Legislative Assembly and a Council of Ministers.

The names of Indian States that compose Himachal Pradesh are Chamba, Sirmur, Suket, Baghal, Baghat, Balsan, Bushahar, Bhajji, Bija, Darkoti, Dhami, Jubbal, Keonthal, Kumarsain, Kunihar, Kuthar, Mahlog, Mangal, Sangri, Tharoach and Mandi. The tributaries are Delath, Dhadi, Ghund, Khaneti, Koti, Madhan, Ratesh, Rawingarh and Theog.

The districts of Himachal Pradesh & Bilaspur—Chamba, Mandi, Sirmoor, Mahasu and Bilaspur.

KUTCH

Capital—Kutch
Population—567,606
Area (sq. m.)—16,724

Literacy—17·1 p.c.
Density of Pop.—34 per sq. m.

Kutch with her north frontier with the Sind Province of Pakistan and bounded by the Arabian Sea in the west, Saurashtra in south and east and connected with Rajasthan in the north-east, has an area of 16,724 sq. miles and a population of 567,606 according to 1951 census. Some portion of the State is occupied by what is known as the Rann of Kutch which is covered by water during most part of the year. This State, spoken of by the ancient Greeks for her maritime trade facilitated by deep calm water approaches, has a good arable soil which produces in the main wheat, bajra, jowar, barley and cotton. Excluding the salty marsh known as the Rann of Cutch, near the frontier with Sind, State is rich in gypsum, clays, limestone, iron and lignite. Well-known for beautiful embroidery and silver work, the State also manufactures silk and cotton goods. Trade, as of yore, is still mainly carried by sea. In view of the geographical situation of the State and the potentialities of this area, the development of which will require a considerable amount of money as well as technical assistance, which neither the State by itself nor the State of Saurashtra with which it was possible to integrate the State could provide, it was decided that the best solution of the State would be to treat it as a centrally administered unit. Agreement was accordingly signed by the Ruler on 4th May, 1948 and the administration was taken over by a Chief Commissioner on behalf of the Government of India on 1st June, 1949.

The State is provided with a *Council of Advisers* under Part C States Act of 1951.

MANIPUR

Capital—Imphal
Population—577,635
Area (sq. m.)—8,628
Literacy—11·4
Density of Pop.—67 per sq. m.

Manipur, hilly state on the eastern borders of Assam and protruding into Burma is another border State which has great strategic importance. It is, for the most part, surrounded by tribal hill areas in Assam; on the east it is bounded by the tribal territories of Burma. The security arrangements of this area required the special attention of the Government of India and it was therefore decided to take it over for Central administration. Forests of various kinds cover the great part of her mountain ranges; the chief staple crop of this strategic State is rice; tea also is being produced in small quantities, other vegetable productions are fruits and cotton. Handloom industry is the principal industry of the State. The administration was taken over by a Chief Commissioner on 15th October, 1949.

In the Imphal Valley the people are mostly Vaishnavas. Their language is a branch of the Kuki-Chin family with diversities. Manipuris seem to possess an inborn love for music and dance. Manipuri dance is one of the classics of Indian dances.

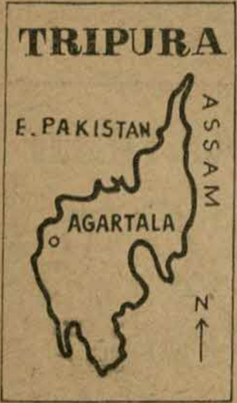
Manipur is noted for the exellence of its breed of horses. The English game of polo has its origin in this remote corner of the world. The main population is "Meiteis" inhabiting the valley with some 40 tribes and sub-tribes known by the generic names of Nagas and Kukis.

Under *Part C States Act of 1951*, the State is provided with a Council of Advisers.

TRIPURA

Capital—Tripura
Population—639,029
Area (sq. m.)—4,032

Literacy—15·5
Density of Pop.—158 per sq. m.



Tripura, an ancient hilly State lying to the south-west of Assam and protruding into East Pakistan, has an area of 4,032 sq. miles with a population of 639,029 according to 1951 census. Very rich in her forest resources as also mineral resources including petroleum, her agricultural produce includes, rice jute, tea, sugarcane, cotton, oilseeds, etc. Besides handwoven cotton goods of unique designs, the State has at present very few industries. Her only means of communication now with the Union are by air and through a newly-constructed road through Assam.

Tripura's frontier with Pakistan runs to about 720 miles on the North-west, West, South and south-east. Its opening with India runs to about 180 miles.

There are many aboriginal races in Tripura among whom may be mentioned Chakmas, Riangs, Tipras, Kukies, Mags etc.

The State was taken over by a Chief Commissioner on behalf of the Government of India on 15th October, 1949.

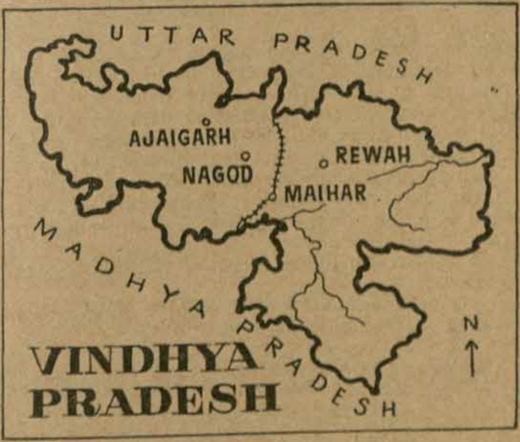
The State is provided with a *Council of Advisers* under Part C States Act of 1951.

The State has ten administrative Divisions—Sadar, Khowai, Kailashahar, Dharmanagor, Sonamura, Udoypur, Belonia, Sabroom, Kamalpur and Amarpur.

VINDHYA PRADESH

Capital—Rewa	*Literacy*—6·1 p.c.
Population—3,574,690	*Density of Pop.*—151 per sq. m.
Area (sq. m.)—23,603	

Vindhya Pradesh was formed by union of 35 Baghelkhand and Bundelkhand States on April 2, 1948. It now has within its territorial limits the areas of 25 Bundelkhand and Baghelkhand States as well as a number of villages of Uttar Pradesh, Madhya Pradesh, Madhya Bharat transferred to it on 25th Jan. 1950. The ten States or a greater part of them were also transferred to Uttar Pradesh, Madhya Pradesh and Madhya Bharat on the date as enclaves lying in the vicinity of those States. Vindhya Pradesh lies between Uttar Pradesh in the North and East and Madhya Pradesh in the South. On the west lies Madhya Bharat and some parts of Uttar Pradesh. It is situated between the U.P. and M.P. The fertile soil of the area assured of about 40 inches of rainfall annually, yields among other things rice, wheat, jowar, gram and pulses. The forest resources are also considerable.



Rewa, the biggest unit among these, also contains such valuable minerals as coal, manganese, bauxite, and limestone. Panna, another unit contains diamonds. Industries are of recent growth and have yet to be developed in this hilly tracts of territory with little of good communications. The forest of Vindhya Pradesh cover 1/3 of the area of the State. It produces good timber—sal, teak and other varieties. Its valuable bamboo forests contain the potential of good paper industry. Other useful products are lac and tendu leaves. Its forests are famous for wild animals—tiger, panther, wild bear, spotted deer and sambhar.

About twenty-two minerals occur in Vindhya Pradesh of which nine are being worked out at present, namely, coal, diamonds, limestone, corundum, ochres, fireclay, silliminite, barytes quartz, felspar and building stone. The mineral areas of the Pradesh are Sidhi, Rewa, Panna, Chattarpur and Tikamgarh.

Scattered over the undulating surface are famous temples and health resorts—secred Amarkantak, Chittrakoot temples, Ahar Jain temples of Datia and Tikamgarh districts, Bharhut Buddhist stupas near Satna, world-famous Khajuraho temples, near Chattarpur, Madkhera temple near Tikamgarh, Jugalkishore and Prannath temples of Panna.

General climate of the Pradesh is warm and dry with excessive heat in summer months excepting for the regions situated at higher altitude like Amarkantak. The rainfall at certain places like Amarkantak is as high as 60" annually and the average rainfall throughout the state is nor less than 35" except for Datia district which has an average rainfall of 25".

Vindhya Pradesh is a Part C State, under the Part C State Act and is governed by a Lt.-Governor with the aid of a Council of Ministers. The State has got a State Assembly of 60 members out of which 12 seats are reserved for members of scheduled castes and scheduled tribes.

The main occupation of the people is agriculture and is the chief source of livelihood of more than 90 p.c. of its population and a subsidiary source of income of another 8 per cent.

The entire Pradesh is combination of vast verdant plain coupled with beautiful mountainous chains of the Vindhya ranges with most alluvial fertile valleys in between them watered by rivers.

The following states were integrated to form Vindya Pradesh—Rewa, Ajaigarh, Baraunda, Bijawar, Chhatarpur, Charkhari, Datia, Maihar, Nagod, Orchha, Panna (Salute States) and Alipura, Bhaisunda, Garrauli, Gaurihar, Jaso, Kamta, Rajaula, Khaniadhana, Kothi, Lugasi, Naigawan-Rebai, Pahra, Paldeo, Sohawal, Taraon (Non-Salute States).

The districts of Vindhya Pradesh—Sidhi, Rewa, Satna, Shahdol, Datia, Chhatarpur, Tikamgarh, Panna.

ANDAMAN AND NICOBAR ISLANDS

Capital	.. Port Blair.	Literacy	.. 25·8 p.c.
Population	.. 30,971	Density of Pop.	.. 10 per sq. m.
Area (sq. m.)	.. 3,215		

The *Andaman Islands* lie in the Bay of Bengal, 120 miles from Cape Negrais in Burma, 780 from Calcutta, and 740 from Madras. Five large islands closely grouped together are called the Great Andamans, and to the south is the island of Little Andaman. There are some 204 islets, the two principal groups being the Ritchie Archipelago and the Labyrinth Islands. The total are is 3,215 sq. miles. The Great Andaman group is about 219 miles long and, at the widest, 32 miles broad. The group, densely wooded, contains many valuable trees, both hard wood and soft wood. The best known of the hard woods is the padauk or Andaman red wood; gurjan is also well-known and is in great demand for the manufacture of plywood. Large quantities of soft wood are supplied to match factories.

The islands possess a number of harbours and safe anchorages, notably Port Blair in the south, Elphinstone and Bonington in the middle and Port Cornwallis in the north. The original inhabitants of the islands are of a small Negrito type who live in the forests by hunting and fishing. They have no fixed habitation, and do no cultivation. Their civilization is about that of the Stone Age. Their numbers are not known as they prefer to avoid all contact with civilzation. The total population of the Andaman Islands (excluding the aborigines) is 30,971 according to 1951 census. Coconut, coffee and rubber are great sources of income. The islands are slowly being made self-sufficient in paddy and rice, and now grow approximately half their annual requirements. No proper survey of the mineral resources of these islands has yet been undertaken.

From 1858 to March 1942 the islands were used by the Government of India as a penal settlement for convicts serving life sentences and long terms. The islands were occupied by the Japanese forces on the 23rd of March, 1942, and reoccupied by the Allies on 8th October, 1945. On reoccupation the penal settlement was abolished.

The Andaman Islands are administered by the President acting through a Chief Commissioner and an Advisory Council of 5 members. The seat of administration is at Port Blair, which is connected with Calcutta and Madras by a mail streamer which calls approximately once every 3 or 4 weeks at Port Blair. The islands are connected to India by wireless telegraphy.

The *Nicobar Islands* are situated to the south of the Andamans, 75 miles from Little Andaman. The British formally took possession in 1869. There are 19 islands, 7 uninhabited; total area, 635 square miles. The islands are usually divided into 3 groups (southern, central and northern), the chief islands in each being respectively, Great Nicobar, Camotra with Nancowrie and Car Nicobar. There is a fine land-locked harbour between the islands of Camotra and Nancowrie, known as Nancowrie Harbour. The coconut is the main item of trade, and a major item in their diet; and they have been cultivating the coconut for as long as anyone can remember.

The Nicobar Islands were occupied by the Japanese forces in July, 1942; and Car Nicobar was developed as a big supply base. The Allies reoccupied the islands on the 9th of October 1945. The Japanese built some roads in Car Nicobar and a small jetty at Malacca in Car Nicobar. They also built a small jetty in the harbour at Nancowrie.

The islands are part of the Chief Commissionership of the Andaman & Nicobar Islands; and the Government is represented by an Assistant Commissioner at Car Nicobar.

SIKKIM

Capital .. Gangtok. Area .. 2,744 sq. m.
Population .. 137,725

Sikkim lies between India and Tibet and is flanked by Nepal and Bhutan. The Singalila and Chola ranges which run southward from the main chain of the Himalayas, separate Sikkim from Nepal on the west and from Tibet and Bhutan in the east. The country has an area of 2,744 sq. miles, its extreme length from north to south being 73 miles and its extreme width 55 miles. Its population is 137,725 according to 1951 census consisting of people partly of Tibetan origin, partly Lapcha tribesmen and partly of Nepalese immigrants and Buddhism is the religion of the ruling family.

Rhododendrons are one of the glories of Sikkim. There are as many as 40 species of them. There are about 500 different kinds of orchids in Sikkim.

Sikkim had long been treated as an Indian State but with a special position in view of its geographical situation. Political relations between India and Sikkim is dated from 1817 and until the transfer of power in August, 1947, they were regulated by a treaty signed in 1861.

A new treaty between India and Sikkim has been signed on 5th December, 1950 providing for the continuance of this State as a protectorate of India enjoying autonomy in regard to its internal affairs. By it, all previous treaties between British Government and Sikkim were cancelled. The Government of India is responsible for the defence and territorial integrity of Sikkim. It has the right to take such measures as it considers necessary for the defence of Sikkim or the security of India. In particular, the Government of India has the right to send troops anywhere within Sikkim. Government of Sikkim shall not import any arms, ammunitions or other warlike materials without the previous consent of the Indian Government. The external relations of Sikkim is conducted and regulated solely by the Government of India and Sikkim shall have no dealings with any foreign power. Government of India have the exclusive right of constructing, maintaining and regulating railways, aerodromes, posts, telegraphs, telephones, wireless in Sikkim. Indian nationals within Sikkim is subject to the laws of Sikkim and subjects of Sikkim within India is subject to the laws of India. Government of India agreed to pay Rs. 1 lakhs annually to Sikkim.

Sikkim first legislative body known as Sikkim State Council came into being on the 7th August, 1953.

Maharaja—Sir Tashi Namgyal. *Dewan*—Sri J. S. Lal.
India's Political Officer—Sri B. K. Kapur.

Executive Council

Sonam Tsering, Kashiraj Pradhan.
J. S. Lall—*Presiding Officer*

STATES BORDERING INDIA

BHUTAN

Capital .. **Punakha** Area (sq. m.) .. 18,000

Bhutan is a small land-locked semi-independent State lying on the south-east slope of the Himalayas bordered on the south and west by the Union of India. Its area is 18,000 square miles. The importance of Bhutan to India's defence, occupying as it does strategic place on the north-eastern border alongside Nepal and Sikkim is obvious, specially with Tibet completely falling under the control of communist China.

Bhutan did not belong to the category of Indian States in the usual sense of the term. Bhutan is under the protectorate, in respect of foreign relations, of the Government of India. Before the conclusion of the new treaty between the Governments of India and Bhutan, which was signed at Darjeeling on August 8, 1949, the main instruments governing India's relations with Bhutan were the Sinchula Treaty of 1865 as amended by the Treaty of 1910, between the former Government of India and the Government of Bhutan. Under the treaty of 1949, the Government of India undertook to exercise no interferences in internal administration of Bhutan. On their part, the Government of Bhutan agreed to be guided by the advice of the Government of India in regard to their external relations. The Government of India is to pay to Bhutan annually a sum of rupees five lakhs. Government of India also returned to Bhutan Government, about 32 sq. miles of territory known as Dwangiri. The treaty provides among other things, that Bhutan shall be free to import with the assistance and approval of the Government of India whatever arms,amunitions warlike materials or stores may be required for Bhutan. This arrangement will hold good so long Government of Bhutan is friendly to India and there is no danger to India for such imports. Bhutan also agreed that there should be no export of arms and ammunitions across the frontier of Bhutan either by the Government of Bhutan or by private individuals. The treaty also provides for extradition.

As for the administration of the country, the ruler is absolute. There is no appeal, no court of law. There is no political party. The country is divided into nine provinces and each province is under the administrative control of a Penlop who resembles the feudal zamindars of India. It is through these nine Penlops and their chief secretaries that the Maharaja rules the country.

Ruler—**H. H. The Maharaja Jigme Dorji Wangchuk**

NEPAL

Capital	.. Katmandu	Area (sq. m.)	.. 56,000

Nepal is a land-locked country between India and Tibet. Its area is about 56,000 sq. miles with a population of about 5,580,000. The greater part of the country is mountainous. The relations of Nepal with the Government of India were regulated by the treaty of 1816 and subsequent agreements. With the transfer of power in India, the two governments have exchanged representatives at the highest level. Nepal has also established international relations with England and U.S.A. Nepal has three distinctions, *i.e.*, it is the only Hindu Independent State of the world, it contains Mount Everest, the height measured mountain in the world. It produces the toughest fighting men in the world—the Gorkhas.

The ruling power had been so long the hereditary Ranas. Though theoretically the king was supreme ruler but the real power was vested in the Prime-Minister. This domination by an aristocratic hereditary party was always resented by general mass of the people and this unrest came to a head in 1950, when insurgents rose against the Rana rule and establish democratic form of Government. The administrative structure was reorganised in accordance with a proclamation made by the King on February 18, 1951. The introduction of these changes marked the end of the hereditary rule of the Ranas which was in existence from 1867. There is now a Cabinet of Ministers who are jointly responsible to the King. This is only an interim arrangement. A Constituent Assembly would be set up to draw a permanent constitution.

Two treaties—one treaty of peace and friendship and other a treaty of trade and commerce have been signed between the Governments of India and Nepal on July 31, 1950. In the first treaty, two governments agree mutually to acknowledge and respect the complete sovereignty, territorial integrity and independence of each other. India and Nepal will inform each other of "any serious friction or misunderstanding" with a neighbouring state likely to impair their relations.

Two Governments agreed to appoint Consuls-General. Government of Nepal shall be free to import from and through India, arms, ammunitions or warlike materials and equipment necessary for the security of Nepal. Both Governments agreed to grant on a reciprocal basis, to the nationals of one country in the territories of the other the same privileges in the matter of residence, ownership of property, participation in trade and commerce, movement and other privileges of a similar nature. In economic matters, each government guarantees "national treatment" to the citizens of the other in its territory.

King—**His Majesty Tribhuvan Bikram Shah Deva.**

Nepal's Cabinet

M. P. Koirala—*Prime Minister.*	Mr. Mahabir Shamsher.
Mr. Naradmuni Thuling.	Mr. Suryanath Das Yadav.
Mr. Tripurwir Singh.	

TIBET

Tibet occupies a strategic position between the northern frontier of Indian continent and borders of Soviet Russia and communist China. With an area of some 460.000 sq. miles, she has a population which is thought to be near five million and of these it is said over 800,000 are Buddhist monks living in 3.000 monsteries that are to be found scattered about the country. The altitude of Tibetan plateau averages 15,000 ft., but of course there are many mountains considerably higher. Communications are for foot-traffic only and journeys must be reckoned in days and weeks. But it is quite wrong to think that the whole country, as bleak, barren and cold. It is Chang Tang, the northern plateau, that is tree-less, windswept, barren area. To the east and south-east the deep gorges of the rivers make that part a terrain that is difficult to penetrate. Much of the rest of the country is fertile and produces good crops. There are excellent grazing grounds in western Tibet, described as a land of 'milk and honey' in old Sanskrit books.

Buddhism came into the country from India in the 8th century and the Tibetan has moulded it into the present form of Lamaism. The strong religious leader during 10th to 13th centuries was a Bengali religious reformer Atisha and he was instrumental in spreading Buddhism in the country.

The present Dalai Lama was discovered in 1935 two years after the death of the previous and 13th holder of the position.

The Chinese influence and power on Tibet began in the 18th century when Chinese Emperor invaded the country and established authority. But Chinese influence on Tibet was always loose and at the end of the 19th century it was merely nominal.

An Anglo-Chinese Convention was signed in 1890 under which a trade centre was opened at Yatung in Tibet but it was never looked upon with favour by Tibet which often violated this convention. As a result of this, a Tibet Mission under the leadership of Col. Younghusband was sent to Lhasa when a fighting took place between Tibetans and the British. So Tibetans were forced to sign a new convention in September 7, 1904 providing for erection of boundary posts between Sikkim and Tibet, opening of three trade marts, unrestricted traffic by existing routes and payment of heavy indemnity. This convention of 1904 was again ratified in 1906.

From 1906 the Chinese Government tried to establish greater authority over Tibet by force. and Dalai Lama had to flee from the country, but in 1912 when Chinese revolution took place, Tibetans was able to drive Chinese almost beyond Tibet. Dalai Lama returned to Lhasa from India where he had taken shelter. In 1913 a triparite Conference was held in Simla between the Chinese, Tibetans and the British to settle their mutual relations, but at the last moment the Chinese withdrew from the Conference and the British and Tibetans signed a treaty which settled the relations between the two countries.

From 1918 to 1933 there were constant friction and fighting between the Chinese and Tibetans which kept the relation between two countries always confused. In 1918 the Tibetans almost completely cleared the country of Chinese troops. With the death of 13th Dalai Lama in 1933 the country was being ruled by a regent. 14th Dalai Lama, the present occupant assumed the charge of the country in Sept., 1939. In 1923 the Panchen Lama (second important Lama, also known as Tashi Lama) had to flee to China due to quarrel with Dalai Lama where he died in 1937. A new incarnation found out as Panchen Lama was not accepted by Dalai Lama. This divided the country into parties. Communist Government in China now tried to establish its firm hold on Tibet and took up the cause of Panchen Lama and invaded the country on the pretext of liberating Tibet in 1950. The Communist Government of China have greatly consolidated their position and Chinese garrisons have been placed in almost all parts of Tibet.

India's relationship with Tibet remained fluid for several decades till a conference was held in 1914 at Simla under the presidency of Sir Henry McMohan at which the wellknown "Simla Convention" was drafted. The Convention recognised the autonomy of Tibet under Chinese authority.

India's relationship was conducted through the British Agent and Political Officer in Sikkim, with the assistance of Trade Agents at Gyantse, Yatung and Gartok, but in 1936, India established direct contact with the Tibetan Government in view of political developments in that country with Chinese suzerainty remaining merely nominal rather than effective.

With the changes that have now taken place in Tibet and with the Chinese now in effective control of Tibet, the relationship has now been sought to be placed on a more formal and accepted diplomatic basis.

With the establishment of Chinese suizerenty in Tibet, the relation between Tibet and India has also been changed from 1952. The Government of India and China have agreed that Indian Mission should henceforth be designated Consulate-General. This new arrangement replaces 16 year-old Indian Mission and also marks the formal end of India's direct foreign relations with Tibetan Government. The change in the status of Indian Mission shows that Chinese Government have now full control of foreign relations in Tibet for the first time in history. Under the present agreement a full-fledged Consulate-General begins to function. The significant provision in the agreement is the continuance of India's three Trade Agencies at Gyantse, Gartok and Yatung. The trade agencies will be under the overall charge of the Indian Consulate-General at Shaga.

PAKISTAN

Capital	.. Karachi	Area (sq. m.)	.. 364,737
Population	.. 758,42,000	Pop. per sq. m.	.. 208

Area—The area of Pakistan is 364,737 square miles. Pakistan comprises two regions, generally spoken of as West Pakistan and East Pakistan lying respectively to the north-west and north-east of India. While West Pakistan embraces practically the whole of the valley of the Indus and its tributaries on either side, East Pakistan covers the vast lower valley of the Brahmaputras. The two regions are separated from each other by about a thousand miles of Indian territory. The distance between two Pakistan by sea is 3,000 miles.

Western Pakistan—It comprises the West Punjab, Sind, Baluchistan, North-West Frontier Province and the tribal areas and states that lie between that province and Afghanistan and the other acceding States.

East Pakistan—Though fringed with hills on its northern and eastern borders, East Pakistan is almost wholly a country of plains. Few parts of it are more than 600 feet above sea level. It is watered by mighty rivers such as the great silt-bearing Brahmaputra and the channels into which the Ganges pours itself in its rush towards the sea. The monsoon winds bring an abundance of rainfall and consequently there are in addition snow-fed rivers, innumerable streams, large and small and depressions full of water.

Punjab—Comprises the western part of the former Punjab province as defined by Sir Cyril Radcliffe's boundary award. Under the award, the districts attached to Pakistan are (*a*) Lahore division with Lahore, Gujranwala, Gurdaspur, Sheikpura and Sialkot as its main centres, (*b*) Rawalpindi division including Rawalpindi, Attock, Jhelum, Mianwali and Shahpur, (*c*) Multan division including Multan, Dera Ghazi Khan, Lyallpur, Montgomery and Muzaffargarh.

North-West Frontier Province—Is the most strategic province of Pakistan and was incorporated in Pakistan as a result of the referendum in July, 1947. It consists of the settled districts and tribal areas.

Roughly, the North-West Frontier Province is the country lying north of Baluchistan between the Indus and the Durand boundary line of Afghanistan. The province falls into three distinct geographical sections; the cis-Indus district of Hazara; the "settled districts" of Peshawar, Mardan, Kohat, Bannu and Dera Ismail Khan, lying between the Indus and the mountain range of the north; and the wild, rugged, arid and stony country on the north and west between the settled districts and the Durand Line.

Sind—Which came into existence as a separate entity as result of the division of the Bombay Presidency on April 1, 1936, has an area (excluding Khairpur State) of 50,397 sq. miles and a population of 46,08,000 according to 1951 census. Sind coast lines are nearly 150 miles long. Large part of Sind belongs to Great Indian Desert.

Baluchistan—Has a total area of 54,456 sq. miles and comprises (*a*) Frontier British Baluchistan proper (*b*) leased and tribal areas, (*c*) Baluchistan States covering 79,546 sq. miles of which Kalat and Las Bela are the most important. The Province is predominantly Muslim. The climate is semi-desert or desert. The province is outside the influence of monsoon. Rainfall does not usually exceed 8 inches in a year. The density of population is the smallest of all provinces of India and Pakistan. The people belong to the three principal races,—Brahui, Baluchi and Pathan. Most of the territory of Baluchistan consists of four States Kalat, Las Bela, Ukaran and Makran, the latter nominally a feudatory of the former. Khan of Kalat exercises only a vague suzerainty. Outside these is Baluchistan proper.

East Pakistan—Consists of East Bengal and Sylhet district. Eastern Pakistan is almost wholly a country of plains. Few parts of it are more than 600 feet above sea level. It consists following districts—(*a*) Chittagong Division including the districts of Chittagong, Noakhali, Tippera and Chittagong Hill Tracts, (*b*) Dacca Division including the districts of Dacca, Faridpur, Bakerganj and Mymensingh, (*c*) Rajshahi Division including the districts of Rajshahi, Rangpur, Pabna, Bogra, Dinajpur, Kushtea, Jessore and Khulna.

Pakistan States—The States that have joined Pakistan are as follows—*Bhawalpur, Kalat, Khairpur, Las Bela, Kharan, Chitral, Dir, Swat, Amb* and *Phulera.*

Bhawalpur is in the extreme south-west of Punjab. The State has an area of 17,471 sq. miles.

Kalat is the biggest State in Pakistan. It lies on the western border of Pakistan. It has an area of 53,995 sq. miles.

The whole State is divided into five divisions—Kachhi, Sarawan, Jhalawan, Makran and Kharan. The later is semi-independent.

Khairpur State lies in Upper Sind with an area of over 6,050 sq. miles. The climate is hot and dry, because the average rainfall is never more than 15" per year. Agriculture is the chief occupation of the people. Wheat, cotton and other grains are the main products.

Chitral lies in the north-west of Western Pakistan. It has an area of about 4,000 sq. miles. The valleys of the State are extremely fertile. Wheat, barley, maize, and rice are grown abundantly.

Dir is a small State of 3,000 sq. miles.

Swat is situated in the valley of Swat river on the borders of N.W.F. Province. It can be divided into two sections—Swat Kohistan and Swat proper.

Amb is situated in the upper valley of the Indus. Its area is only 225 sq. miles.

Phulera is another small State. It consists of 98 small villages.

Religion—The dominant religion of Pakistan is Islam. Hindu population in Western Pakistan is now very small after mass evacuation following the communal riots. In East Pakistan due to migration, Hindu population would be less than 20 p.c. There is considerable Christian population in West Punjab.

Language—In the extreme North-West of Pakistan, *Baluchi, Pushtu* and *Brahui* languages are spoken. The principal language of N.W.F. Province is Pushtu which does not belong to the Indo-Aryan family of language. The language of Sindh is *Sindhi* written in Perso-Arabic script. Urdu is the main language in Punjab. But Punjabi is also spoken by the large number of people in Punjab, which is a sister dialect of *prakrit* and bears a close resemblance of Urdu. *Bengali* is spoken by the 99 per cent of the East Bengal and Sylhet.

Agriculture—Agriculture is the mainstay of the Dominion. Pakistan's position regarding agriculture is superior to India. The soil is naturally fertile and while Eastern Pakistan has an abundance of rainfall, Western Pakistan has one of the world's finest systems of canal irrigation. The principal agricultural produce of Pakistan is rice, wheat, jawar, bajra, maize, cotton, tobacco and jute. Food crops mainly rice and wheat account for 77·5 p.c. of the total area under principal crops. About 75 per cent of Indian jute is produced in Pakistan and along with long and medium staple cottons of West Punjab and Sind, she occupies an enviable position. Main centre of Pakistan's rice production is East Bengal. Pakistan is an agricultural surplus area and normally has a surplus for export.

Wheat—Both West Punjab and Sind are surplus wheat areas. The production area is West Punjab, Sind and States of Bhowalpur and Kairpur.

Gram—Pakistan's share in gram production is about 15 p.c. of total Indian production.

Sugarcane—The sugarcane cultivation is mainly confined to West Punjab and East Bengal. But the production is small to meet the entire requirement.

Rice—East Bengal is the richest area in Pakistan for production of rice. Sind is also a surplus rice area.

Cotton—Comes from West Punjab, Sind and States of Bhawalpur and Khairpur and also a small quantity from N.W.F. Province Best variety of Indian cotton is produced in Pakistan (West Punjab and Sind).

Silk—The chief areas of silk production is Rajshahi district, Rangpur district and Bogra district of Eastern Pakistan.

Jute—Pakistan and India hold a world monopoly of jute, of which Pakistan produces about 75 p.c.

Tobacco—Pakistan's production of tobacco mainly comes from Eastern Pakistan such as Rangpur, Dinajpur and Chittagang Hill Tracts. Certain quantities are also grown in the Punjab, Sind, and N.W.F. Province.

Wool—The N.W.F.P. produces 3,200,000 lbs. of wool annually and sheep found in Kagan yields wool which can be matched with the finest wool in the world. Pakistan wool is practically all of carpet variety, although small quantities of superior grades are produced. It is also available in Punjab, Sind and Baluchistan.

Tea—Is produced mainly in Sylhet and Chittagong and Tippera areas of East Bengal, and it has an exportable quantity of tea.

Trade—Pakistan's chief exports are cotton and jute, which together make up well over half the value of the country's export trade, followed by hides and skins, fish and fertilisers etc., in that order.

Pakistan's imports comprise iron, steel and other metals, machinery, mill-stone, coal, mineral oils, cotton, woolen and silk yarn and cloth, motor cars, bicycles, radios, instruments and apparatus of various kinds, china and glassware, medicines, drugs and luxury goods. The most important of manufactured goods are cotton textiles which account for about 50 p.c. of the total imports. India, United Kingdcm and U.S.A. are the principal exporting countries.

Livestock and Fisheries—In the agricultural economy of Pakistan, livestock plays an important role. Pakistan produces annually 4,000,000 pieces of hide and 5,000,000 pieces of skin. Those are exported mostly to Europe and America, as also 250,000 tons of bones. Pakistan possesses some of the best breeds of cattle, sheep, goats, horses and camels. The well-defined breeds of cattle are *Red Sindhi* and *Sahiwal* for milk, *Thari*, *Bhagnari* and *Dhanni* for draught and *Lohani* and *Rojhan*, a light type. *Ravi* and *Nili* are well-known buffalo breeds. Most of the sheep population is confined to Western Pakistan. The important sheep breeding areas are N.W.F.P., Baluchistan and Sindh. The important breeds of sheep are fat-tailed Hashtnagri, Harnai, Bibrik and Waziri and thin-tailed Demani, Kaghani and Sohi. Baluchistan and West Punjab are the best horse breeding areas. Camels are bred in the arid regions particularly in Sind, Bhawalpur and Makran.

In fisheries too, Pakistan has abundant resources. East Bengal, Sind and Baluchistan have access to marine fisheries. The Gangetic delta of the Sunderbans and Indus delta are extremely rich in estuarine fisheries.

Minerals—Pakistan is not rich in mineral resources excepting in chromite, gypsum and to some extent in petroleum. Baluchistan has considerable untapped mineral wealth. In Chitral, Pakistan has the sub-continent's only deposits of antimony.

Chromite—It is the only major mineral available in Pakistan (in Hindubagh of Baluchistan). It is the second largest chromite deposit in the world.

Sulphur—Largest known deposit of sulphur in Pakistan is in the Kalat State of Baluchistan and also available in Koh-i-Sultan mountain in Baluchistan.

Petroleum—Production of petroleum for undivided India was 81·99 million gallons in 1945 of which Pakistan area's share was estimated at 12 million gallons. The only important oilfield is Karur in the West Punjab and Dhulian.

Gypsum—Pakistan has extensive deposits of gypsum, mostly in the Punjab, but also in N.W.F.P.

Fireclay—The only source of fierclay in Pakistan is Ratucha mine.

Salt—Pakistan is rich in salt. It produces some of the purest rock salt in the world. It is available in the Khewra mines of the Punjab Salt Range.

Industries—Pakistan is essentially an agricultural country. She has neither big industries nor developed mineral resources.

Its main cottage industries are rugs, carpets, grass-mating. It leads Indian sub-continent in the manufacture of sports goods in Sialkot. Sind produces salt, cement, cotton, woollen goods etc. In N.W.F.P. Pakistan has plenty of sheep, poultry, drugs and fruit production. Some of the finest wools are to be found in this province. Date-palm is the chief production of Baluchistan. Sugar, rice, bamboo, jute, tea and tobacco are found in plentiful quantity in East Bengal. Baluchistan is practically one of the world's greatest fruit and vegetable growing areas.

Fruit industry—Baluchistan is the premier fruit-growing area of Pakistan. It produces large quantities of excellent fruits such as melons, apples, grapes, cherries, apricots, peaches, pears and plums. Fruits are being increasingly exported and it has developed into a big industry. N.W.F.P. and West Punjab are also great fruit-growing areas.

CENSUS OF PAKISTAN—1951

(total population—1000's)

	Area (sq. m.)	*Population*	*Persons per sq. mile.*
Pakistan ..	364,737	7,58,42	208
Baluchistan ..	54,456	6,22	11
Baluchistan States ..	79,546	5,52	6·9
East Bengal ..	54,501	4,20,63	777
Federal Capital, Karachi	812	11,26	1,378
N. W. F. P. ..	13,560	32,53	240
N. W. F. P. (Frontier Regions) ..	25,699	26,47	103
Punjab ..	62,245	1,88,28	302
Bhawalpur ..	17,471	18,23	104
Sind ..	50,397	46,08	91
Khairpur State ..	6,050	3,20	53

GOVERNMENT OF PAKISTAN

Governor-General—H. E. Mr. Ghulam Mohammad.

CENTRAL MINISTERS

Mr. Mahomed Ali—*Prime Minister (Defence & Commerce).*
Mr. Mohd. Zafrulla Khan—*Foreign Affairs.*
Mahomed Ali (*Finance & Economic Affairs*).
Mustaq Ahmed Gurmani (*Interior, States & Frontier Relations*).
Dr. A. M. Mallik (*Health, Works & Labour*).
Dr. I. H. Qureshi (*Education*).
A. K. Brohi (*Law, Minority & Parliamentary Affairs*).
Khan Abdul Qaiyum Khan (*Industries, Food & Agriculture*).
Shoaib Qureshi (*Information,*
Taffazal Ali—(*Commerce*).

Ministers of State

Ghayasuddin Pathan—*Minority Affairs, Parliamentary Affairs and Agricultue.*

Sardar Amir Azam Khan—*Defence.*

Murtaza Raza Chaudhury—*Finance.*

The Hon. Sardar Bahadur Khan—*Communications.*

Army, Navy & Air Force Heads

Commander-in-Chief, Army—Gen. Mohd. Ayub Khan.

Commander-in-Chief, Royal Pakistan Air Force—Air Vice-Marshal L. W. Cannon.

Commander-in-Chief, Royal Pakistan Navy—Rear-Admiral H. M. S. Chowdhuri.

EAST BENGAL

Governor—Chaudhury Khaliquezzaman.

Ministers

Mr. Nurul Amin—*Prime Minister.*
Syed Mohammad Afzal.
Mr. Hassan Ali.
Mr. Syed Abdus Salim.
Mr. Abdul Hamid.
Mr. Mafizuddin Ahmad.
Mr. Habibullah Bahar.
Mr. D. N. Barori.

NORTH-WEST FRONTIER PROVINCE

Governor—Khwaja Sahabuddin.

Ministers

Sardar Abdur Rashid Khan—*Chief Minister.*
Mian Zaffar Shah.
Mohd. Ayub Khan.
Khan Malik-Ur-Rahman Kayani.
Samsul Haq.
Farid Khan.

PUNJAB

Governor—Mian Amin-ud-Din.

Ministers

Malik Peroze Khan Noon—*Prime Minister.*
Sardar Abdul Hamid Dastri.
Sardar Mohd. Khan Leghari.
Muzzaffar Ali Khan Qizilbash.
Ch. Ali Akbar.
Mohd. Alamdar Shah Gilani.
Sheikh Masood Said.

SIND

Governor—Habib Ibrahim Rohimtoola.

Ministers

Pirzada Abous Sattar—*Chief Minister.*
Hamid Hasan Faruki.
Pir Ali Mohammed Rashdi.
Ghulam Kehar.
Qazi Mohammad Akbar.
Qazi Abdul Mannan.
Mir Ali Nawaz Khan Talpur.

Bhawalpur—Lt.-Gen. H. S. Sir Sadiq Mohd. Khan—*Ruler.*
Kalat State—Maj. H. E. Belgar Begi Mir Sir Ahmad Yar Khan of Kalat—*Ruler.*
Chitral State—Lt.-Col. H. H. Haji Mohammed Muzaffar-Mulk the Mehtar of Chitral—*Ruler.*
Swat State—Brigadier-General Abdul Haq Jahan Zeb—*Ruler.*
Baluchistan—Qurban Ali Khan—*Agent to the Governor-General.*
Karachi—A. T. Naqvi—*Chief Commissioner.*
Khairpur State—H. H. Mir Ali Murad Khan Talpur—*Ruler.*

REPUBLIC OF INDIA.

President.
Dr. Rajendra Prasad.
Vice-President.
Dr. S. Radhakrishnan.
Prime Minister.
Jawaharlal Nehru.
Chief Justice of India.
Mr. Justice Mehr Chand Mahajan.

Commander-in-Chief, Indian Army.
General Rajendra Sinhji.
Commander-in-Chief, Indian Navy.
Vice-Admiral C. T. M. Pizey.
Commander-in-Chief, I. A. F.
Air-Marshal G. E. Gibbs.
Air Marshal S. Mukherjee (from April, 1954)

ARMY COMMANDS

Southern Command—Lt.-Gen. Shrinagesh, G.O.C.-in-Chief.
Eastern Command—Lt.-Gen. Sant Singh, G.O.C.-in-Chief.
Western Command—Lt.-Gen. Nathu Singh, G.O.C.-in-Chief.

SECRETARIES OF THE PRESIDENT & PRIME MINISTER

Secretary to President—Sri Shavax A. Lall.
Military Secy. to the President—Maj.-Gen. B. Chatterjee.
Principal Private Secretary to the Prime Minister—Shri B. N. Kaul.
Cabinet Secretary—Shri Y. N. Sukthankar, I.C.S.

SECRETARIES TO THE GOVERNMENT OF INDIA

Ministry of Kashmir Affairs—Shri Vishnu Sahay, I.C.S.
Ministry of Natural Resources & Scientific Research—Dr. S. S. Bhatnagar.
Ministry of Education—Humayun Kabir.
Ministry of Communications—Shri B. N. Jha.
Ministry of Defence & Partition—Shri H. M. Patel, I.C.S.
Ministry of External Affairs—N. R. Pillai, I.C.S. *Secy. General.*
Ministry of External Affairs (Foreign)—R. K. Nehru, I.C.S.
Ministry of External Affairs (Commonwealth Relations)—Shri B. H. B. Tyabji.
Ministry of Finance (Rev. & Expenditure)—K. R. K. Menon.
Ministry of Finance (Economic Affairs)—K. G. Ambegaokar, I.C.S.
House of the People—Shri M. N. Kaul.
Council of State—Shri S. N. Mukerjee.
Ministry of Labour—Shri K. N. Subramanian, I.C.S.
Ministry of Home Affairs—Shri A. F. Pai.

Ministry of Commerce & Industry—Shri Boothalingam, I.C.S.

Ministry of Information & Broadcasting—Shri P. C. Chaudhuri, I.C.S.

Ministry of Law & Minority Affairs—Shri K. Y. Bhandarkar.

Ministry of Railways (Ry. Board)—Shri A. Hildreth.

Ministry of Rehabilitation—Shri C. N. Chandra, I.C.S.

Ministry of States—Shri C. S. Vankatachar.

Ministry of Transport—Shri N. M. Ayyar.

Ministry of Production—Shri A. K. Chanda.

Ministry of Works, Housing & Supply—Shri M. K. Vellodi.

Ministry of Health—Shri V. K. B. Pillai, I.C.S.

Planning Commission—Shri Y. N. Suthankar, I.C.S.

Ministry of Irrigation & Power—Shri T. Sivasankar, I.C.S.

TARIFF COMMISSION

Shri M. D. Bhat, I.C.S., (*Chairman*)
Mr. B. N. Adarkar, (*Member*).
Dr. B. N. Das Gupta, (*Member*).
Dr. D. K. Malhotra—*Secretary.*
Mr. P. L. Kumar—*Technical Adviser.*

CENTRAL WATER & POWER COMMISSION

A. N. Khosla (*Chairman*).
S. A. Gadkary.
Man Singh.
Kanwar Sain.
Dr. K. P. P. Menon.

THE SUPREME COURT OF INDIA

Hon. Justice Mehr Chand Mahajan, *Chief Justice.*
Mr. Justice S. R. Das, *Judge.*
Mr. Justice B. K. Mukherjea, *Judge.*
Mr. Justice Vivian Bose, *Judge.*
Mr. Justice N. H. Bhagwati,
Mr. Justice Ghulam Hasan, *Judge*
Mr. Justice Venkatarama Aiyar, *Judge.*
Mr. Justice Bachu Jagannadhadas.

MEMBERS OF THE RAILWAY BOARD

Mr. F. C. Badwar, (*Chairman—Railway Board & Member, Engineering*).
Mr. A. K. Chanda (*Financial Commissioner, Railways*).
Mr. S. S. Vasist, (*Member, Transportation*).
Mr. V. Nilakantan, (*Member, Staff*).

UNION PUBLIC SERVICE COMMISSION

R. N. Banerjee, I.C.S., (*Chairman*)
A. A. A. Faizee, (*Member*).
S. V. Kunungo, (*Member*).
Shri G. C. Chatterjee, (*Member*).
Shri N. Govindarajan, (*Member*)
Shri C. B. Nagarkar, (*Member*).
Shri N. K. Siddhanta, (*Member*).

IMPORTANT POSTS

Solicitor-General of India—Sri C. K. Daphtary.

Attorney-General of India—M. C. Sitalvad.

Director-General of Civil Aviation—L. C. Jain.

Controller & Auditor-General—A. K. Chandra (from August 1954).

Director-Greneral of Observatories—V. V. Sohoni.

Controller of Patents & Designs—K. Seshagiri Rao.

Controller of Printing & Stationery—C. A. Subramanyam.

Commissioner, Scheduled Castes and Tribes—L. M. Shrikant.

Director-General of Archæology—Sri M. S. Vats.

Director of Anthropology—Dr. B. S. Guha.

Director-General of Health Services—Lt.-Col. C. K. Lakshmanan.

Director-General of Resettlement and Employment—Dr. N. Das.

Director-General, Posts & Telegraphs—H. L. Jerath.

Director-General, Ordnance Factories—K. K. Framji.

Surveyor-General of India—Brigadier I. H. R. Wilson.

Director-General of Shipping—N. M. Buch.

Chairman, Central Board of Film Censors—C. M. Agarwalla.

Director-General, A. I. R.—N. A. S. Lakshmanan.

Director, Council of Scientific and Industrial Research—Dr. S. S. Bhatnagar.

Director, Zoological Department of India—Dr. S. L. Hora.

Director, Geological Survey of India—Dr. M. S. Krishnan.

Director of Archives—B. A. Saletore.

Principal Press Information Officer—B. L. Sharma.

Director-General of Commercial Intelligence & Statistics—P. M. Mukerjee.

Accountant-General—Narahari Rao.

GENERAL MANAGERS, INDIAN RAILWAYS

Eastern Railway—P. C. Mukherjee.

Northern Railway—K. B. Mathur.

Central Railway—H. P. Hira.

Western Railway—K. P. Mushran.

Southern Railway—T. A. Joseph.

North-Eastern Railway—G. Pande.

Chittaranjan Locomotive Works—Karnail Singh.

INDIAN TAXATION COMMISSION

Dr. John Mathai, (*Chairman*).
V. L. Mehta.
Dr. K. V. R. V. Rao.
R. K. Menon.
B. Venkatappiah.
Dr. B. K. Madan.

INDIAN AMBASSADORS & OTHER REPRESENTATIVES ABROAD

1. EMBASSIES

Country	*Name*	*Designation and address*
Afghanistan ..	Mr. Bhagwat Dayal	Ambassador, Kabul.
Argentine ..		Ambassador, Lavelle 462 (5th floor) Bunenos Aires, (*Concurrently Minister to Chile*).
Belgium ..	P. A. Menon, I.C.S.	Ambassador, Belgium (*Concurrently Minister to Luxemburg*), Embassy of India. 62, Avenue Franklin Roosevelt, Brussels.
Brazil ..	Raja Joginder Sen Bahadur of Mandi	Ambassador, Embassy of India, Rua Barao Flamengo 16-22 Dio de Janeiro.
Burma ..	K. K. Chettur	Ambassador, Randeria Building, Rangoon.
China ..	N. Raghavan	Ambassador, 32, Legation St., Peking, China.
Czechoslovakia	Dharma Vira	Ambassador, 22, Thunovake, Prague III.
Egypt ..	Ali Yavar Jung Bahadur	Ambassador, Egypt (*Concurrently to Lebanon and Jordan*).
Eire ..	B. G. Kher	Ambassador (*Also High Commissioner for India in the U.K.*) India House, Aldwych London W.C. 2.
France ..	Wing-Commander H. S. Malik, I.C.S.	Ambassador 7, Avenue Kelebar, Paris (*Concurrently Minister to Norway*).
Germany ..	S. Dutt, I.C.S.	Ambassador (*Also head of the Ind. Military Mission*, Bonn).
Indonesia ..	B. F. H. B. Tyabji	Ambassador, 178, Koningsplein Noord, Djakarta.
Iran ..	Dr. Tara Chand	Ambassador, Avenue Shah Raza, Tehran.
Italy ..	B. R. Sen	Ambassador, Rome (*Also concurrently to Yugoslavia*), Embassy of India, Rome.

Country	*Name*	*Designation and address*
Japan ..	Dr. M. A. Rauf	Ambassador, Embassy of India, Tokio.
Iraq ..	Khub Chand	Ambassador, Indian Embassy, Iraq.
Mexico ..	G. L. Mehta	Ambassador, (*Concurrently to U.S.A.*).
Nepal ..	B. K. Gokhale	Ambassador, Khatmandu.
Netherlands ..	B. N. Chakravarty	Ambassador, Embassy of India, The Hague.
Switzerland ..	Y. D. Gundevia	Ambassador, 18, Jungfraustrasse, Berne.
Thailand ..	M. K. Kripalani	Ambassador, Bangkok.
Turkey ..	C. S. Jha, I.C.S.	Ambassador, Ankara.
U.S.A. ..	G. L. Mehta	Ambassador, Washington, D.C. (*Concurrently Ambassador to Mexico*).
U.S.S.R. ..	K. P. S. Menon	Ambassador, Embassy of India, Moscow (*Concurrently Minister to Hungary*).
Yugoslavia ..	B. R. Sen	Ambassador, Embassy of India, Via Lovanio 24, Rome.

2. HIGH COMMISSIONERS

Australia ..	General K. M. Cariappa.	High Commissioner (*Concurrently to New Zealand*), Civic Centre, Canberra.
Canada ..	R. R. Saksena	High Commissioner, 202, Elgin St., Ottawa.
Ceylon ..	C. C. Desai, I.C.S.	High Commissioner, Colombo.
Pakistan ..	Mohan Sinha Mehta	High Commissioner, Karachi.
	S. K. Banerjee	Dy. High Commissioner 144, Lahore.
	B. K. Acharya, I.C.S.	Dy. High Commissioner, Dacca.
South Africa..	Vacant	
United Kingdom ..	B. G. Kher	High Commissioner, India House, Aldwych, London. W.C. 21 (*Concurrently Ambassador of India to Eire*).

3. LEGATIONS

Austria ..	Y. D. Gundevia	Minister (*Also Ambassador to Switzerland*), 18, Jungfraustrasse, Berne.

Denmark	Mr. A. C. N. Nambiar	Minister, Stockholm (*Concurrently to Sweden and Finland*).
Finland	Mr. A. C. N. Nambiar	Minister (*Concurrently Minister to Sweden & Denmark*); Legation of India, Strandevagon 47, IV Stockholm.
Jordan	Ali Yavar Junj	Minister, Embassy of India, 19, Sharia Mahomed Mazhar Pasha, Cairo.
Lebonon	Do.	Do.
Luxemburg	P. A. Menon	Minister (*Concurrently Ambassador to Belgium*). 62, Avenue Franklin Roosevelt, Brussels.
Norway	H. S. Mallik	Minister (*Concurrently Ambassador to France*). 7, Avenue Keleber, Paris.
Philippines	M. R. A. Baig	Envoy Extraordinary & Minister, Plenipotentiary, Manila.
Portugal	Kewal Singh, I.C.S.	*Charge of Affaires*, Legation of India, Lisbon.
Ethiopia	Major-General Hiralal Atal	Envoy Extraordinary and Minister Plenipotentiary, Legation of India, Addis Ababa.
Sweden	Mr. A. C. N. Nambiar	Envoy Extraordinary and Minister Plenipotentiary, (*Concurrently Minister to Denmark and Finland*), Legation of India, Stockholm.
Syria	John A. Thivy	Minister, Damascus.
Vatican	Y. D. Gundeva	Minister (*Also Ambassador Switzerland and accredited as Minister in Austria*); Legation of India, 18, Jungfraustrasse, Berne.

4. SPECIAL MISSIONS

Malaya	M. G. Menon, I.C.S.	Rep., Govt. of India, Singapore.
Tibet, Sikkim, Bhutan.	B. K. Kapoor	Political Officer, Gantok, Sikkim.
United Nations	R. Dayal, I.C.S.	Permanent Rep. of the Govt. of India to U.N. New York.

5. CONSULATES

Country	*Name*	*Designation and address*
Pondicherry ..	Mr. Kewal Singh Chaudhury	Consul-General, of India, Pondicherry.
Finland ..	Juho Savio	Consul-General for India, Helsinki, Finland.
Jalalabad (*Afganistan*)	D. Sareen	Vice-Consul for India, Jalalabad.
Jedda (*Saudi Arabia*) ..	Mr. M. K. Kidwai	Consul-General for India, Jedda.
Kandahar (*Afganistan*)	K. L. S. Pandit	Vice-Consul for India, Kandahar (*Afghanistan*).
Medan (*Sumatra*)	Jagat Singh	Consul for India, Medan (*Indonesia*).
Meshed (*Iran*)	A. Majid Khan	Consul-General.
Lhasa (*Tibet*)	A. K. Sen	Consul-General of India, Lhasa.
Shanghai ..	Vacant.	Consul-General, of India, Shanghai (*China*).
Zahidan ..	Vacant.	Vice-Consul for India Zahidan. (*East Iran*).
San Francisco	M. A. Hussain, I.C.S.	Consul-General, of India, San Francisco.
Mehsana ..	Abdul Majeed	Consul-General, of India,
Copenhagen ..	Victor B. Strand	Hony. Consul-General of India.
Goa ..	V. H. Coelho	Consul-General, of India, Goa.
Kashgar (*China*)	Vacant.	Consul-General, of India, Kashgar.
New York ..	A. S. Lall, I.C.S.	Consul-General, of India, 3 East, 64th St., New York.
Saigon ..	O. P. Mohla	Vice-Consul for India, Saigon.
Hanoi ..	Vacant.	Consular Agent, Hanoi.
Ceylon ..	P. S. Menon	Agent of the Govt. of India, Kendy.
Malaya ..	T. V. Rama Krishna Rao	Agent of the Govt. of India, Kaula Lumpur.
Gyantse ..	Maj. S. M. Krishnathry.	Ind. Trade Agent, Gyantse (Tibet).
Yatung ..	Sonam Tobden Kazi	Ind. Trade Agent, Yatung (Tibet).

Gartok ..	Shri Lakshman Singh	Ind. Trade Agent, Gartok (West Tibet).

6. COMMISSIONS

Br. East Africa	Shri Apa B. Pant	Commissioner for Govt. of India, accredited to Southern Rhodesia, Northern Rhodesia and Nayasaland as Commissioner and the Belgian Congo and Ruanda Urundi as Consul-General.
British West Indies (including Br. Guiana). ..	Shri Badrinath Nanda	Commissioner for Govt. of India, Port of Spain, Trinidad, B.W.I.
Fiji ..	Raja Rameswar Rao	Commissioner for the Govt. of India, B. V. Building, Waiman Road, Suva.
Mauritius ..		Commissioner for Govt. of India, Edith Cavell St., Port Louis, Mauritios.
Aden ..	A. S. Dhawan	Commissioner for Govt. of India, Aden.

INDIAN GOVERNMENT TRADE REPRESENTATIVES

EUROPE

Place	*Name and Address*	*Sphere of Activities*
London ..	Dharam Vira, Commercial Adviser to the High Commissioner for India "India House", Aldwych, London, W.C. 2.	United Kingdom and Eire.
Paris ..	M. P. Mathur, 1st Commercial Secy. to the Indian Embassy, 15, Rue Alfred Dehodencq, Paris XVI eme.	France and Norway.
Berne ..	J. S. Mehta, 1st Secy. Legation of India, 18, Jungfraustrasse, Berne (Switzerland).	Switzerland.
Rome ..	S. S. Bajpai, Commercial Councillor, Embassy of India, Via Lovanio, 24 Rome.	Italy, Greece and Yugoslavia.

Bonn ..	B. P. Adarkar, Commercial Councillor, Embassy of India in Germany, 262, Koblenzer Strasse, Bonn, Germany.	Germany.
Vienna ..	K. V. Ramaswamy, Indian Vice-Consul cum Attache, 69, Strenwartestrasse, Vienna VVIII, Austria.	Austria.

AMERICA

New York ..	A. S. Lall, Consul-General for India, 3 East 64th Street, New York, 21, N.Y.	East U. S. A. & Cuba.
San Francisco	M. A. Hussain, Consul-General for India, 417, Montgomery St. San Francisco, California.	West U. S. A.
Buenos Aires..	V. C. Vijaya Raghvan 2nd Commercial Secy., Indian Embassy, Avenide **Roque** Saenz Pena 628, **Buenos** Aires (Argentina).	Argentine, Bolivia, Chile, Paraguay and Uruguay.

AFRICA

Mombasa ..	S. V. Patel, 1st Secy. Commission in East Africa & Indian Govt. Trade Commissioner, "Africa House", Killindini Road, P. Box No. 614, Mombasa, (Kenya).	East Africa (Kenya, Uganda and Tanganyika), Zanzibar, Rhodesia, & Nyasaland.
Alexandria ..	S. P. Ratnam, 1st Commercial Secretary, Embassy of India and Ind. Government Trade Commissioner, Al Basir Building No. 5, Rue Adib Bey, Issac, Avenue de la Reine Nazli, Alexandra (Egypt).	Syria, Egypt, Transjordan Sudan, Lebanon & Cyprus.

AUSTRALIA

Sydney ..	Dr. T. G. Menon, 1st Commercial Secy., High Commissioner of India; Prudential Building, 39-40, Martin Place, Sydney, Australia.	

Wellington ..	B. Sanyal, 1st Commercial Secy., High Commissioner of India, New Zealand, 49, Willis St., Wellington.	New Zealand.

ASIA

Tokyo ..	V. C. Trivedi, First Secy. Embassy of India, Empire House (Naig Building) Marunouchi, Tokyo, Japan.	Japan.
Colombo ..	B. K. Masand, Secretary, High Commissioner for India in Ceylon, Fort Colombo.	Ceylon.
Rangoon ..	H. N. Vibhakar, 1st Commercial Secy., Indian Embassy, Randeria Building, Phayre St., Rangoon.	Burma.
Karachi ..	Rajkumar Raghunath Sinha of Sitamau, 1st Commercial Secy., High Commissioner of India, Chartered Bank Chambers, Valika Mahal, N. J. Setna Road, New Town, Karachi.	Pakistan.
Dacca ..	P. Das Gupta, 1st Commercial Secy., High Commissioner of India, Gopi Krishna Lane P.O. Wari, Dacca.	East Pakistan.
Singapore ..	Mr. J. Coelho, 1st Commercial Secy. to the Rep. of India Malaya, India House, Singapore.	Hongkong & Malaya.
Manila ..	M. R. A. Baig, Minister, Legation of India, 509-510 Burke Building, Escolta, Manila.	Philippines.
Djakarta ..	S. Krishnamurti, First Commercial Secy. Embassy of India 178, Koningsplein, North, Djakarta.	Indonesia.
Aden ..	A. B. Thadani, Commissioner for the Govt. of India, Aden.	Aden Br. Somaliland and Italian Somaliland.

Bangkok ..	Gurbachan Singh, 2nd Commercial Secretary, Embassy of India, Bangkok, (Thailand).	Thailand.

FOREIGN DIPLOMATIC REPRESENTATIVES IN INDIA

Country	*Designation*	*Name*
Afghanistan ..	Ambassador Extraordinary & Plenipotentiary.	H. E. Sirdar A. H. Khan Aziz, New Delhi.
Argentina ..	Do.	H. E. Rene Lawson, New Delhi.
Belgium ..	Do.	H. E. Mons. Stephen Hallot, New Delhi.
Brazil ..	Do.	H. E. Mr. I. Falcao, New Delhi.
Burma ..	Do.	H. E. Maha Thray Sithu U. Kyin, New Delhi.
China ..	Do.	H. E. Gen. Yuen Chung-hsien, New Delhi.
Czechoslovakia	Do.	Dr. Ladislav Dudlil, New Delhi.
Egypt ..	Do.	H. E. Mons. Ismail Kamel Bey, Delhi.
Iraq ..	Do.	H. E. Mons. Mohd. Salim Al-Radi, New Delhi.
France ..	Do.	H. E. Count Stanislas Ostrorog, New Delhi.
West Germany	Do.	H. E. Dr. E. W. Meyer, N. Delhi.
Hungary ..	Minister.	Peter Kos. New Delhi.
Indonesia ..	Ambassador Extraordinary & Plenipoteniary.	H. E. Dr. L. N. Palar, New Delhi.
Iran ..	Do.	H. E. Ali Asghar Hekmat, New Delhi.
Italy ..	Do.	H. E. Dr. Alberto Berio, New Delhi.
Japan ..	Do.	H. E. Nishiyama, New Delhi.
Mexico ..	Do.	H. E. L. Emilio Portes Gil, New Delhi.
Nepal ..	Do.	
Netherlands ..	Do.	H. E. Mr. Baroh W. F. L. Van Pallandt, New Delhi.

Thailand ..	Do.	H. E. Laung Bhadravadi, New Delhi.
Turkey ..	Do.	H. E. Naman Tahir Seymen New Delhi.
U.S.A. ..	Do.	H. E. Mr. George, V. Allen, New Delhi.
U.S.S.R. ..	Do.	H. E. Mons. Mikhail Menshikov, New Delhi.
Yugoslavia ..	Do.	H. E. Dr. Jovko Nikolis, New Delhi.

HIGH COMMISSIONERS

Australia ..	High Commissioner	H. E. Mr. W. R. Crocker, New Delhi.
Canada ..	Do.	H. E. Mr. Escot M. Reid, New Delhi.
Ceylon ..	Do.	H. E. Mr. C. Coomaraswamy, New Delhi.
Pakistan ..	Do.	H. E. Raja Gazanfar Ali Khan, New Delhi.
United Kingdom ..	Do.	H. E. Sir Alexander Clutterbuck, New Delhi.

LEGATIONS

Austria ..	Envoy Extraordinary & Minister Plenipotentiary.	H. E. Dr. Albin Lennk, New Delhi.
Chile ..	Charge de' Affaires.	H. E. M. Serrano, New Delhi.
Denmark ..	Envoy Extraordinary and Minister Plenipotentiary.	H. E. Harry E. T. Frandzen, New Delhi.
Ethiopia ..	Do.	H. E. Ato Mascal Gabre Keflegzi, New Delhi.
Finland ..	Do.	H. E. Mons. Hugo Valvanne, New Delhi.
Holy See ..	Apostolio Internuncio	H. E. The Most Revd. Martin Lucas.
Hungary ..	Charge d' Affairs.	Mr. E. Zadar, New Delhi.
Jordan ..	Do.	Mons. Ferhan Bey Al-Shubaylat, New Delhi.
Norway ..	Envoy Extraordinary and Minister Plenipotentiary.	H. E. Knut Megre, New Delhi.
Philippine ..	Do.	Mr. Narciso Romos, Delhi.
Portugal ..	Do.	H. E. Dr. Vasco Vieira Garin, New Delhi.
Sweden ..	Charge d' Affairs.	Mr. Dag Bergman, New Delhi.
Switzerland ..	Envoy Extraordinary and Minister Plenipotentiary.	H. E. Max Grasslie, New Delhi.

TRADE REPRESENTATIVES OF OVERSEAS GOVERNMENTS IN INDIA

Name of the country	*Designation*
Afghanistan	Economic Attache to the Royal Afghan Embassy in India, 24, Ratendone Road, New Delhi.
Austria ..	Austrian Trade Representative in India, Queen's Mansions, Bastion Road, Fort, Bombay.
Australia ..	Australian Government Trade Commissioner in India, Mercantile Bank Building, 52/66, Mahatma Gandhi Road, Bombay. Australian Government Trade Commissioner in India, 2, Fairlie Place, Calcutta.
Belgium ..	Commercial Counsellor, Belgium Embassy in India, Theatre Communication Building, Connaught Place, New Delhi.
Burma ..	Trade Commissioner for the Union of Burma, Jaisalmer House, Man Singh Road, New Delhi.
Canada ..	Commercial Counsellor to the High Commission for Canada in India, 38, Ratendone Road, New Delhi. Commercial Secretary to the High Commission for Canada in India, Gresham Assurance House, Mint Road, Bombay.
Ceylon ..	Commercial Secretary to the Ceylonese High Commission in India, Ceylon House, Brace Street, Bombay.
China ..	Counsellor for Commercial Affairs to the Embassy of the People's Republic of China in India, Jind House, Lytton Road, New Delhi.
Czechoslovakia	Commercial Attache to the Czechoslovak Embassy in India, 25, Aurangzeb Road, New Delhi. Commercial Counsellor to the Czechoslovak Embassy in India, Himalaya House, Palton Road, Bombay.
Denmark ..	Commercial Counsellor to the Royal Danish Legation in India, Pollonji Mansion, New Cuffee-Parade, Bombay.
Egypt ..	Commercial Attache to the Egyptian Embassy in India, Room No. 39, Swiss Hotel, Delhi.
Finland ..	Commercial Secretary to the Finish Legation in India, 1, Humayun Road, New Delhi.

France ..	Counsellor for Economic Affairs, French Embassy in India, 2, Aurangzeb Road, New Delhi.
	Commercial Attache, French Embassy in India, King's Road, Bombay.
	Commercial Attache, French Embassy in India, 13, Park Mansion, Park Street, Calcutta.
	Commercial Attache, French Embassy in India, Paradise Building, 26, Mount Road, Madras.
Germany ..	Commercial Secretary, Federal Republic of German Embassy in India, 86, Sundar Nagar, Mathura Road, New Delhi.
Hungary ..	Counsellor, Hungarian Legation in India, 'Revills' Cuffe Parade Extension, Bombay-5.
Indonesia ..	Third Commercial Secretary, Indonesian Embassy in India, Curzon Road Barracks, New Delhi.
Iran ..	The Iranian Consul General in India, 'Dorchwster' Queens Road, Bombay.
Iraq ..	Third Secretary, Legation of Iraq in India, 21, Prithviraj Road, New Delhi.
Israel ..	Israel Government Trade Commissioner for India and South-East Asia, Marine Villa, Bombay.
Italy ..	Commercial Secretary, Embassy of Italy in India, 17, York Road, New Delhi.
Japan	Second Secretary (Commercial), Japanese Embassy in India, 4, Circular Road, Diplomatic Enclave, New Delhi.
Netherlands ..	Commercial Attache, Netherlands Embassy in India, 298, Bazar Gate Street, Bombay.
New Zealand	New Zealand Government Trade Commissioner in India, Mercantile Bank Building, 2nd Floor Mahatma Gandhi Road, Bombay-1.
Norway ..	Commercial Counsellor, Legation of Norway in India, Maidens Hotel, New Delhi.
	Commercial Attache, Consulate General for Norway in India, Imperial Chambers Wilson Road, Ballard Estate, Bombay.
Pakistan ..	Commercial Secretary, High Commission for Pakistan in India, Sher Shah Road Mess, New Delhi.
Philippines ..	Second Secretary and Consul, Legation of the Philippines in India, Maiden's Hotel, Delhi.

Poland ..	Representative, Polish Ministry of Foreign Trade in India, 9/10, Hotel Metropole Victoria Road, Karachi-17, Pakistan.
Portugal ..	Trade Agent, Consulate General of Goa in India, 19-A, Cuffee Parade Colaba, Bombay.
Spain ..	Spanish Trade Commissioner for India, 'Oceana' 153, Marine Drive, Bombay.
Sweden ..	Commercial Secretary, Swedish Legation in India, Indian Mercantile Chambers, Nicol Road, Ballard Estate, Bombay.
Switzerland ..	Swiss Trade Commissioner in India, Gresham Assurance House, Sir Ferozshah Mehta Road, Bombay.
Thailand ..	Trade Representative, Government of Thailand in India, 2, Nazar Ali Lane, Calcutta.
Turkey ..	Commercial Attache, Turkish Embassy in India, Maiden's Hotel, Delhi.
United Kingdom ..	Senior U. K. Trade Commissioner in India. Principal U. K. Trade Commissioner at Delhi. Eastern House, Man Singh Road, New Delhi.
	Principal U. K. Trade Commissioner at Calcutta, 1, Harrington Street, Calcutta-16.
	Principal Trade Commissioner at Bombay, Mercantile Bank Building, Mahatma Gandhi Road, Fort, Bombay.
	Trade Commissioner at Madras, P.O. Box 1575, Armenian Street, Madras.
U.S.A. ..	Counsellor for Economic Affairs, Embassy of the U.S.A. in India, Bahawalpur House, Sikandra Road, New Delhi.
U.S.S.R. ..	U. S. S. R. Trade Representative in India and Commercial Counsellor, Embassy of the U. S. S. R. in India, 4, Camac Street, Calcutta.

CENTRAL GOVERNMENT

CABINET MINISTERS

Shri Jawaharlal Nehru (*Prime Minister*)	External Affairs and Defence.
Maulana Abul Kalam Azad	Education and Natural Resources & Scientific Research.
Shri Jagjiwan Ram	Communications.
Rajkumari Amrit Kaur	Health.
Shri C. D. Deshmukh	Finance.
Shri Gulzarilal Nanda	Planning & Irrigation & Power.
Dr. Kailas Nath Katju	Home Affairs and States.
Shri Rafi Ahmed Kidwai	Food & Agriculture.
Shri T. T. Krishnamachari	Commerce & Industry.
Shri C. C. Biswas	Law & Minority Affairs.
Shri Lal Bahadur Shastri	Railways & Transport.
Sardar Swaran Singh	Works, Housing & Supply.
Shri V. V. Giri	Labour.
Shri K. C. Reddy	Production.

Ministers of the Cabinet Rank.

(But not Members of the Cabinet)

Shri Satya Narayan Sinha	Parliamentary Affairs.
Shri Ajit Prasad Jain	Rehabilitation.
Shri Mahavir Tyagi	Defence Organisation.
Dr. B. V. Keskar	Information & Broadcasting.
Shri D. P. Karmarkar	Commerce.
Dr. Panjabrao S. Deshmukh	Agriculture.

Deputy Ministers

Shri Raj Bahadur	Communications.
Shri Keshava Deva Malaviya	Natural Resources & Scientific Research.
Sardar Surjit Singh Majithia	Defence.
Shri Balwant Nagesh Datar	Home Affairs.
Shri Abid Ali	Labour.
Shri Manilal Chaturbhai Shah	Finance.
Shri Jagannathrao K. Bhonsle	Rehabilitation.
Shri O. V. Alagesan	Railways & Transport.
Sm. M. Chandrasekhar	Health.
Shri Anil Kumar Chanda	External Affairs.
Shri M. V. Krishnappa	Food & Agriculture.
Shri Jaisukhlal Hathi	Irrigation & Power.
Shri Satis Chandra	Defence.
Shri Arun Chandra Guha	Finance.

Parliamentary Secretaries

Sadath Ali Khan—*External Affairs.*

Sm. Lakshmi N. Menon—*External Affairs.*

Shahnawaz Khan—*Railways & Transport.*

Dr. Mono Mohan Das—*Education.*

J. N. Hazarika—*External Affairs*

B. R. Bhagat—*Finance.*

Dr. K. L. Shrimali—*Education.*

G. Rajagopalam—*Information & Broadcasting.*

Rajaram Girdharilal Duby—*Production.*

HEADS OF STATES OF INDIA

GOVERNORS

Mr. Jairamdas Daulatram	Assam
Mr. R. R. Diwakar	Bihar
Mr. Girijashankar Bajpai	Bombay
Mr. Sri Prakasa	Madras
Mr. P. S. Kumaraswami Raja	Orissa
Mr. C. P. N. Singh	Punjab
Mr. K. M. Munshi	Uttar Pradesh
Dr. H. C. Mookerjee	West Bengal
Dr. Pattavi Sitaramayya	Madhya Pradesh
Mr. C. M. Trivedi	Andhra

RAJPRAMUKHS

General H. E. H. Nawab Sir Mir Osman Ali Khan Bahadur G.C.S.I., G.B.E., Nizam of Hyderabad	Hyderabad
Mr. Karan Singh, *Sadr-i-Riyasat*	Jammu & Kashmir
Lt.-General H. E. Maharajadhiraja Sir Jivaji Rao Scindia Bahadur G.C.S.I., G.C.I.E., LL.D., Maharaja of Gwalior, *Rajpramukh*	Madhya Bharat
Major-General H . H. Maharaja Sir Sri Jaya Chamarajendra Wadiyar Bahadur, G.C.B., G.C.S.I., LL.D. Maharaja of Mysore	Mysore
Lt.-General H. H. Maharajadhiraj Rajeswar Sri Sir Yadavindra Singh Mahendra Bahadur, G.C.I.E., G.B.E., Maharaja of Patiala, *Rajpramukh*	PEPSU
H. H. the Maharana of Mewar, *Maharajpramukh*	Rajasthan
Lt. General H. H. the Maharaja of Jaipur, *Rajpramukh*	
H. H. the Maharao of Kotch, *Up Rajpramukh*	
Lt.-General H. H. Maharaja Shri Digvijayasinhji Ranjit Sinhji Jadeja, Maharaja Jam Saheb of Nawanagar, *Rajpramukh*	Saurashtra
H. H. Sri Padmanabha Dasa Bala Rama Varma, Maharaja of Travancore, *Rajpramukh*	Travancore-Cochin

LT. GOVERNORS

K. Santhanam	Vindhya Pradesh
Major-General M. S. Himmatsinhji	Himachal Pradesh

CHIEF COMMISSIONERS

A. D. Pandit, I.C.S.	Ajmer
Sankar Maitra, I.C.S.	Andaman & Nicobar Islands
Bhagwan Sahay, I.C.S.	Bhopal
Maj.-Gen. M. S. Himatsinji	Bilaspur
Lt. Col. Daya Singh Bedi	Coorg
Shankar Prasad, I.C.S.	Delhi
S. A. Ghatge	Kutch
R. P. Bhargava, I.C.S.	Manipur
V. Nanjappa, I.C.S.	Tripura

CHIEF MINISTERS OF STATES

PART A STATES

Mr. Bishnuram Medhi	Assam
Dr. Sri Krishna Sinha	Bihar
Mr. Morarji Ranchhodji Desai	Bombay
Pt. Ravi Shankar Sukla	Madhya Pradesh
Mr. C. Rajagopalachari	Madras
Mr. Nabakrushna Chaudhuri	Orissa
Mr. Bhim Sen Sachar	Punjab
Pt. Govind Ballabh Pant	Uttar Pradesh
Dr. Bidhan Chandra Roy	West Bengal
Mr. T. Prakasham	Andhra

PART B STATES

Mr. B. Ramkrishna Rao	Hyderabad
Bakshi Ghulam Mohammad	Jammu & Kashmir
Mr. Mishrilal Gangwal	Madhya Bharat
Mr. K. Hanumanthaiya	Mysore
Mr. Jai Narain Vyas	Rajasthan
Mr. U. N. Dhebar	Saurashtra
Mr. A. J. John	Travancore Cochin

PART C STATES

Mr. Hari Bhau Upadhyaya	Ajmer
Dr. Shankar Dayal Sharma	Bhopal
Mr. C. M. Poonacha	Coorg
Choudhuri Brahm Parkash	Delhi
Dr. Y. S. Parmar	Himachal Pradesh
Mr. Shambhunath Shukla	Vindaya-Pradesh

MINISTERS OF STATES

AJMER

Shri Hari Bhau Upadhyaya (*Chief Minister*)	
Shri Bal Krishna Kaul	Home, Finance & P. W. D.
Shri Brij Mohan Lal Sharma	Revenue, Education & Local Self-Government.

ASSAM

Shri Bishnuram Medhi (*Chief Minister*)	Home, Appointment, Tribal Welfare etc.
Shri Motiram Bora	Finance & Revenue.
Shri Siddhinath Sarma	Public Works and Transport.
Shri Omeo Kumar Das	Education, Labour, Etc.
Shri Mohendra Mohan Chaudhury	Food, Agriculture, Publicity etc.
Shri Baidyanath Mookerjee	Supply, Trade & Commerce.
Shri Rupnath Brahma	Medical, Public Health, and Judical.
Shri Ramnath Das	Forest, Electricity, Legislative.
Rev. J. J. M. Nichols Roy	Excise, Jail, Registration, etc.
Shri Abdul Matlib Mazumdar	Local Self-Government, Veterinary, etc.

Deputy Ministers

Shri Hareswar Das	Revenue, Relief & Rehabilitation.
Shri Purnananda Chetia	Education and Labour.

BHOPAL

Dr. Shankar Dayal Sharma (*Chief Minister*)	Home, Revenue, Education and General Administration.
Maulana Tarzi Mashriqui	Food, Civil Supplies, P.W.D. etc.

Deputy Minister

Shri Umrao Singh.

BIHAR

Shri S. K. Sinha (*Chief Minister*)	Political and Appointments.
Shri A. N. Sinha	Finance, Agriculture & Labour.
Shri Ramcharitra Singh	Irrigation and Electricity.
Badrinath Verma	Education.
Shri Krishna Ballabh Sahay	Land Revenue (including Forests and Excise).
Shri Dip Narain Sinha	Cooperation & Development.
Shri Mahesh Prasad Sinha	Industries, Transport and Information.

Shri Shivnandan P. Mandal	Judicial & Legislative.
Shri Deosaran Singh	Medical & Public Health.
Shri Mohammad Shafi	Public Works.
Shri Shah M. Ozair Munemi	Jails, Relief & Rehabilitation.
Shri Bhola Paswan	Local Self-Government and Welfare.
Shri Harinath Mishra	Civil Supplies.

ANDHRA

Shri T. Prakasam (*Chief Minister*)	Public Services, Political Information & Publicity.
Shri N. Sanjeeva Reddi	Home, Police, Law & Order, Public Works & Transport.
Shri K. Koti Reddi	Revenue, Food & Registration.
Shri T. Viswanatham	Law & Finance, Religious Endowments, etc.
Shri D. Sanjivayya	Public Health, Planning, Co-operation, Labour, Harijan Welfad etc.
Shri S. B. P. Pattabhirama Rao	Education & Industries, Excise.
Shri Thimma Reddy	Local Administration and Agriculture, Forests, Animal Husbandry & Fisheries.

BOMBAY

Shri Morarji R. Desai (*Chief Minister*)	Political, Services and Home.
Shri B. S. Hirey	Revenue, Agriculture & Forests.
Shri Dinkarrao N. Desai	Education and Law.
Dr. Jivraj N. Mehta	Finance, Industries and Prohibition.
Shri M. P. Patil	Local Self-Government and Co-operation.
Shri M. M. Naik-Nimbalkar	Public Works.
Shri G. D. Tapse	Backward Classd, Rehabilitation and Fisheries.
Shri Shantilal H. Shah	Labour and Health.
Shri Y. B. Chavan	Civil Supplies.

Deputy Ministers

Sm. Indumati Chimanlal	Education.
Shri B. J. Patel	Public Works Department.
Shri D. N. Wandrekar	Backward Classes.
Shri K. F. Patil	Agriculture and Forests.
Shri B. D. Jatti	Public Health.
Shri B. D. Desmukh	Local Self-Government and Co-operation.
Dr. T. R. Narvane	Prohibition.
Shri Mustafa Faki	Revenue.
Shri V. K. Sathe	Civil Supplies.

COORG

Shri C. M. Poonacha (*Chief Minister*)	Land Revenue, Excise, Etc.
Shri K. Mallappa	Home, Education & Justice.

DELHI

Shri Brahm Parkash (*Chief Minister*)	General Administration, Finance, Home and Revenue.
Dr. Sushila Nayar	Health, Transport and Rehabilitation.
Shri Gopinath Aman	Development, Judiciary and Law.

HIMACHAL PRADESH

Dr. Y. S. Parmar (*Chief Minister*)	General Admn. Finance, and Revenue.
Pandit Padam Dev	Education, Police & Jails, Development, Industries, etc.
Shri Gauri Prasad	Medical, P. W. D., & Health etc.

HYDERABAD

Shri B. Ramakrishna Rao (*Chief Minister*)	General Admn., Information Social Service etc.
Shri D. G. Bindu	Home, Rehabilitation & Law.
Shri K. Venkatranga Reddy	Excise Revenue, Forest, etc.
Shri Vinayakrao R. Vidyalankar	Finance, Statistics, etc.
Dr. G. S. Melkote	Public Works & Labour.
Nawab Mehdi Nawaz Jung	Medical & Rural Reconstruction.
Shri Gopal Rao Ekbote	Education, Local Self-Govt., etc.
Dr. M. Chenna Reddy	Agriculture, Supply, Planning, et

JAMMU AND KASHMIR

Bakshi Ghulam Mohammed (*Chief Minister*)
Shri G. M. Sadiq
Shri G. L. Dogra
Shri Mir Qasim

Deputy Ministers

Shri P. D. Dhar
Shri Ghulam Rasool Renzzu
Shri Ashadulla Mir
Shri Kushak Bakula
Major Piar Singh

MADHYA BHARAT

Shri Misrilal Gangwal (*Chief Minister*)	General Admn., Finance, etc.

Shri Shyamlal Pandyya	Revenue and Food.
Shri Manoharsingh Mehta	Home and P. W. D.
Dr. Premsingh Rathod	Health and Tribal Welfare.
Shri V. V. Dravid	Development and Labour.
Shri Sitaramji Jajoo	Law and Commerce.
Shri Soubhagyamal Jain	Finance.
Shri Narsingh Rao Dixit	Education.

Deputy Ministers

R. V. Vijayavargiya
Sawai Singh Sisodia
Sajjan Singh Vishnar

MADHYA PRADESH

Pandit Ravi Shankar Shukla (*Chief Minister*)	Appointments, General Admn., etc.
Shri Dindayal Gupta	Food, Rehabilitation, & Labour.
Shri D. K. Mehta	Commerce, Industry, Law etc.
Shri B. A. Mandloi	Revenue, Land Reforms, etc.
Raja Naresh Chandra Singh	Public Works, Electricity, Tribal Welfare.
Shri M. S. Kannamwar	Public Health and Jails.
Shri Brijlal Biyani	Finance, Registration, etc.
Shri P. K. Deshmukh	Education, Local Self-Govt. etc.
Shri Shankarlal Tiwari	Agriculture, Rural Development
Shri R. K. Patil	Planning & Development.

Deputy Ministers

Sm. Prabhavati Bai Jakatadar	Commerce & Industry.
Shri Ganeshram Anant	Agriculture.
Shri A. Q. Siddiqui	Education.
Birendra Bahadur Singh.	Home.
Shri Vasantrao Naik	Revenue.
Shri P. L. Bhagat	Finance.

MADRAS

Shri C. Rajagopalachari (*Chief Minister*)	Public and Police in the Home Department.
Shri A. B. Shetty	Medical & Public Health.
Shri C. Subramaniam	Food, Education, Information, Publicity and Finance.
Shri K. Venkataswami Naidu	Religious Endowments and Registration.
Shri V. C. Palaniswami Gounder	Animal Husbandry, Veterinary & Harijan Welfare.
Dr. U. Krishna Rao	Industries, Labour, Transport, Cooperation and Housing.
Shri M. A. Manickavelu Naicker	Land Revenue & Commercial Taxes.
Shri K. P. Kuttikrishnan Nair	Courts, Prisons and Legal Dept.

Raja Shri Shanmuga Rajeswara Sethupathi	Public Works, Accomodation Control.
Shri M. Bhaktavatsalam	Agriculture, Forests & Fisheries, Rural Welfare, Community projects etc.
Shri K. Rajaram Naidu	Local Administration.
Sm. Jothi Vencatachalam	Prohibition & Women's Welfare.

MYSORE

Shri K. Hanumanthaiya (*Chief Minister*)	Palace, High Court, Political, Civil Service, Finance, Economic Affairs, Depressed Classes, etc.
Shri H. Siddaveerappa	Police, Military, Food, Civil Supplies, Etc.
Shri A. G. Ramachandra Rao	Law, Legislation, Prisons, Education, Labour, etc.
Shri T. Chenniah	Medical, Public Health, District Boards, etc.
Shri K. Manjappa.	Revenue and Public Works, etc.
Dr. N. Nagan Gouda	Agriculture, Cooperation, Forests etc.

ORISSA

Shri Nabakrushna Chaudhury (*Chief Minister*)	Home, Works, River Valley Dev. & Public Relations, etc.
Shri Radhanath Rath	Finance and Education.
Shri Sadasiv Tripathy	Revenue, Excise and Supply.
Shri Dinabandhu Sahu	Law, Development and Health.
Shri Sonaram Soren	Commerce, Labour and Tribal & Rural Welfare.
Shri Kishore Chandra Bhanj Deo	Industry and Transport.

Deputy Ministers

Bhairab Ch. Mohanty	Works.
Sm. Basanta Manjari Devi	Health.
Shri Nilamoni Rautray	Jails, Political & Commerce.
Shri Anupa Singh Deo	Public Relations.
Shri Santanu Kumar Das	Local Self-Government and Agriculture.
Shri Tirthavasi Pradhan	Transport.
Shri Krupanidhi Nayak	Supply.

PEPSU*

(President's Rule)

PUNJAB

Shri Bhim Sen Sachar (*Chief Minister*)	General Admn. & Law & Order, etc.
Sardar Partap Singh Kairon	Land Revenue, Development, etc.
Chaudhuri Lehri Singh	Irrigation and Electricity.
Sardar Gurbachan Singh Bajwa	Capital Project & P.W.D.
Sardar Ujjal Singh	Finance, Relief & Rehabilitation and Industries.
Shri Jagat Narain	Education, Health, Transport.
Chaudhri Sundar Singh	Labour, Stationery & Printing.

RAJASTHAN

Shri Jainarain Vas (*Chief Minister*)	Planning, Development, General Administration, Political, etc.
Shri Tikaram Paliwal	Finance, P.W.D., Law, Judical, etc.
Shri Mohanlal Sukhadia	Agriculture, Revenue.
Shri Bholanath	Education & Separate Revenue.
Shri Bhogilal Pandya	Food, Civil Supplies, Scheduled Forests, Cooperation, Etc.
Shri Amritlal Yadav	Castes, etc.
Shri Ram Karan Joshi	Forests, Cooperation, etc.
Shri Kumbaharan Arya	Medical & Public Health.

SAURASHTRA

Shri N. Dhebar (*Chief Minister*)	Cabinet, Work, Co-ordination, Revenue, etc.
Shri Rasiklal U. Parikh	Home, Information, etc.
Shri Manharlal M. Shah	Finance, Audit & Excise.
Shri Jadavji K. Modi	Education & Public Works.
Shri Dayashanker T. Dave	Law, Justice, & Medical.
Shri Ghanshyambhai C. Oza	Rehabilitation, Food, etc.
Shri Ratubhai M. Adani	Local Self-Govt., Development, etc.

TRAVANCORE-COCHIN*

*President's Rule

UTTAR PRADESH

Shri Hargovind Singh (*Chief Minister*)	General Administration, Planning & Cooperation.
Hafiz Muhammad Ibrahim	Finance and Power.
Dr. Sampurnanand	Home and Labour.
Shri Hukum Singh	Industries, Relief & Rehabilitation.
Syed Ali Zaheer	Justice and Excise.
Shri Girdhari Lal	Public Works.
Shri Chandra Bhanu Gupta	Health and Civil Supplies.
Thakur Hargovind Singh	Education & Harijan, Sahayak Dep.

Shri Charan Singh	Revenue and Agriculture.
Shri Mohan Lal Gautam	Local Self-Government.
Shri Kamlapati Tripathi	Information and Irrigation.
Shri Vichitra Narain Sharma	Transport.

Deputy Ministers

Shri Mangla Prasad	Parliamentary Affairs & Cooperation.
Shri Jag Mohan Singh Negi	Forests.
Shri Phool Singh	Planning.
Shri Jagan Prasad Rawat	Agriculture.
Muzaffar Hasan	Jails
Ram Murti	Irrigation
Shri Chaturbhuj Sharma	Public Works Department.

VINDHYA PRADESH

Shri Shambhunath Shukla (*Chief Minister*)	General Administration, Finance & Revenue.
Shri Gopal Sharan Singh	Planning and Judicial.
Shri L. S. Bajpai	Home and Local Self-Govt.
Shri Dan Bahadur Singh	Industries and Supplies.
Shri Mahendra Kumar Jain	Social Services & Education.

WEST BENGAL

Dr. B. C. Roy (*Chief Minister*)	Home, Medical Development and Public Health & Finance.
Shri Prafulla Chandra Sen	Food, Relief and Supplies.
Dr. Rafiuddin Ahmed	Agriculture Co-operative Credit.
Shri Satyendra Kumar Basu	Judicial & Legislative.
Shri Kalipada Mookherjee	Labour.
Shri Khagendra Nath Das Gupta	Works & Buildings.
Shri Hem Chandra Naskar	Forests & Fisheries.
Shrimati Renuka Ray	Refugee Relief & Rehabilitation.
Shri Pannalal Bose	Education, & Land Revenue.
Shri Shyama Prosad Burman	Excise.
Shri Ajoy Kumar Mukherjee	Irrigation & Waterways.
Shri Jadabendra Nath Panja	Cottage & Small Industries.
Shri Iswar Das Jalan	Local Self-Government.
Shri Radhagobinda Roy	Tribal Welfare.
Amulyadhan Mukerjee	Medical & Public Health.
Dr. Jiban Ratan Dhar	Jails.

Deputy Ministers

Sm. Purabi Mukherjee	Women's Education.
Shri Sourindra Mohan Misra	Commerce & Industries.
Shri Shiva Kumar Rai	Labour.
Shri Bijesh Chandra Sen	Rehabilitation.
Shri Chittaranjan Roy	Co-operative Credit.
Shri Gopika Bilas Sen Gupta	Publicity & Public Relations.

Shri Smarajit Banerjee	Food.
Shri Tenzing Wangdi	Tribal Welfare.
Shri Tarun Kanti Ghosh	Townships.
Janab Abdus Shakur	Agriculture.
Shri Rajani Kanta Pramanik	Supplies.
Shri S. C. Ghosh Maulik	Civil Defence.
Shri Satish Chandra Ray Singha	Transport.
Shri Debendra Chandra Dey	Parliamentary Affairs (Home Dept.).
Shri A. M. A. Zaman	Labour.
Sh. Mira Dutta Gupta	Relief.

SPEAKERS AND CHAIRMEN

1. HOUSE OF THE PEOPLE

Speaker .. G. V. Mavalankar
Deputy Speaker .. M. Ananthasayanam Ayyangar

2. COUNCIL OF STATES

Chairman .. Dr. S. Radhakrishnan
Deputy Chairman .. S. V. Krishnamoorthy Rao

3. SPEAKERS, LEGISLATIVE ASSEMBLIES

Assam .. Kuladhar Chaliha
Bihar .. Vindeshwari Prasad Varma
Bombay .. D. K. Kunte
Madhya Pradesh .. Kunjeylal Dubey
Madras .. J. S. Pillai
Orissa .. Nandkishore Das
Punjab .. Dr. Satya Pal
Uttar Pradesh .. A. G. Kher
West Bengal .. Saila Kumar Mukherjee
Hyderabad .. Kashinath Rao Vaidya
Madhya Bharat .. A. S. Patwardhan
Mysore .. H. D. Siddiah
Pepsu .. Kahn Singh
Rajasthan .. Narotham Joshi
Saurashtra .. Maganmal Joshi
Ajmer .. Bhagirath Singh
Bhopal .. Sultan Mohammad
Coorg .. B. S. Kushallappa
Delhi .. Gurumukh Nihal Singh
Himachal Pradesh .. Jaiwant Ram
Vindhya Pradesh .. Shiva Nand

4. CHAIRMEN, LEGISLATIVE COUNCILS

Bihar .. Shyama Prasad Singh
Madras .. Dr. P. V. Cherian

Punjab	.. Kapur Singh
Uttar Pradesh	.. Chandra Bhal
West Bengal	.. Dr. Sunitikumar Chatterjee
Mysore	.. K. T. Bhashyam

INDIAN PARLIAMENT

HOUSE OF THE PEOPLE

Andhra

V. V. Giri.
B. Rajagopala Rao.
N. Ramaseshaiah.
Kandala Subrahmanyam.
Dr. Lanka Sundaram.
Gam Malludora.
Dr. Ch. V. Rama Rao.
Nalla Reddi Naidu.
Kanety Mohana Rao.
B. S. Murthy.
Kondru Subha Rao.
Sankara Buchhikotaiah.
Kadiyula Gopala Rao.
Harindranath Chattopadhyaya.
Kotha Raghuramaiah.
S. V. L. Narasimham.
C. R. Chowdary.
Pisupathi Venkata Raghavaiah.
Mangalagiri Nanadas.
B. Ramachandra Reddi.
Rayasam Seshagiri Rao.
Paidi Lakshmayya.
Y. Gadilingana Gowd.
K. S. Ragavachari.
Y. Eswara Reddy.
T. N. Viswanatha Reddy.
Dr. M. V. Gangadhara Siva.
M. Ananthasayanam Ayyangar.

Assam—13.

S. C. Deb.
Nibaran Chandra Laskar.
Sm. B. B. Khongmen.
Amjad Ali.
Sitanath Brahmo-Choudhury.
Beli Ram Das.
Rohini Kumar Choudhuri.
Kamakhya Prasad Tripathi.
Dev Kanta Borooah.
Debeswar Sarmah.
Jogendra N. Hazarika.
*Chowkhamoon Gohain.
Bimala Prasad Chaliha.

Bihar—55.

S. Sinha.
Kailash Pati Sinha.
Sm. Tarakeswari Sinha.
B. R. Bhagat.
Brajeshwar Prasad.
Ram Dhani Das.
Vijneshwar Missir.
Satyendra N. Sinha.
Dr. Ram Subhag Singh.
Jagjivan Ram.
Kamal Singh.
Jhulan Sinha.
Mahendra Nath Singh.
Dr. Satyanarain Sinha.
Pandit Dwarka Nath Tewary.
Bibhuti Mishra.
Bhola Raut.
B. B. Varma.
Dr. Syed Mahmud.
Thakur Jugal Kishore Sinha.
Digvijaya Narain Singh.
Syamnandan Sahaya.
Awadheshwar Prasad Sinha.
Rajeshwar Patel.
Rameshwar Sahu.
Satya Narayan Sinha.
Shree Narayana Das.
Anirudha Sinha.
Shyam Nandan Mishra.
Lalit Narayan Mishra.
Banarsi Prasad Sinha.
Nayan Tara Das.

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*Nominated by the President to represent Part B. Tribal Areas of Assam.

Mathura Prasad Mishra.
Pt. Suresh Ch. Mishra.
J. B. Kripalani.
Kirai Mushar.
Banarasi Prasad Jhunjhunwala.
Sm. Sushama Sen.
Muhammad Islamuddin.
Phani Gopal Sen.
Bhagwat Jha 'Azad.'
Paul Jujhar Soren.
Ramraj Jajware.
Lal Hembram.
Nageswar Prasad Sinha.
Ram Narayan Singh.
A. Ibrahim.
Jaipal Singh.
Gajendra Prasad Sinha.
Kherwar Jethan.
P. C. Bose.
Dr. Hari Mohan.
Bhajahari Mahata.
Chaitan Majhi.
Kanhu Ram Deogam.

Bombay—45.

Akbar Chavda.
Gulzarilal Nanda.
Maneklal Maganlal Gandhi.
Rupaji Bhavji Parmar.
Shantilal Girdharlal Parikh.
Tulsidas Kilachand.
G. V. Mavalankar.
Muldas Bhuderdas Vaishya.
Fulsinhji B. Dabhi.
Sm. Maniben Vallabhbhai Patel.
Dr. Indubhai B. Amin.
Chandra Shankar Bhatt.
Kanayalal Nanabhai Desai.
Bhahadurbhai Kunthabhai Patel.
Choithram Partabrai Gidwani.
Yeshwantrao M. Mukne.
P. R. Kanavade Patil.
U. R. Bogawat.
Shivram Rango Rane.
Hari Vinayak Pataskar.
S. Ramchandra Bhartiya.
Jayantrao Ganpat Natawadkar.
Govinda Hari Deshpande.
Narhar Vishnu Gadgil.
Sm. Indira A. Maydeo.
Ganesh Sadashiv Altekar.
B. H. Khardekar.
K. L. More
Shankar Shantaram More.
P. N. Rajabhoj.
Chintaman Deshmukh.
Vyankatrao Pirajirao Pawar.
Balwant Nagesh Datar.
S. Veerangauda Patil.
Jagannathrao K. Bhonsle.
Moreshwar Dinkar Joshi.
Rajaram Girdharlal Dubey.
Ramappa Balappa Bidari.
D. P. Karmakar.
T. R. Neswi.
Joachim Alva.
S. K. Patil.
V. B. Gandhi.
Narayana Sadoba Kajvolkar.
Sm. Jayashri Raiji.

Madhya Pradesh—29.

Chandikeshwar S. Singh Ju Deo.
Babunath Singh.
Amar Singh Saigal
Resham Lal Jangde.
Bhupendra Lal Misra.
Shrimati Minimata.
Maganlal Bagdi.
Wasudeo Sridhar Kirolikar.
Pandit Bhagwaticharan Sukla.
Muchaki Kosa.
C. D. Gautam.
Seth Govinda Das.
M. G. Uikey.
Susil Kumar Pateria.
Khub Chand Sodhia.
Pandit B. L. Tiwari.
Syed Ahmed.
Raichand Bhai Shah.
B. L. Chandak.
Sriman Narayan Agarwal.
Sm. Anasuyabai Kale.
T. C. Sakhare.
Mulla Abdullabhai Mulla Taherali.
Dr. Panjabrao S. Deshmukh.
K. G. Deshmukh.
Goswamiraja Sahdeo Bharati.
Gopalrao Bajirao Khedkar.
Laxman Shrawan Bhatkar.

Madras—46.

T. T. Krishnamchari.
P. Natesan.
Sm. M. Chandrasekhar.
O. V. Alagesan.
Dr. A. Krishnaswami.
Dr. D. Ramchander.
M. Muthukrishnan.
N. R. M. Swamy.
C. R. Narasimhan.
N. Sathianathan.
S. V. Ramaswamy.
K. Periaswami Gounder.
S. C. Balakrishnan.
S. K. Babie Kandasamy.
T. S. Avinashilingam Chettiar.
G. R. Damodaran.
N. M. Lingam.
K. M. Vallatharas.
V. Boovaraghasamy.
Dr. Edward Paul Mathuram.
R. Venkataraman.
C. Ramasamy Mudaliar.
K. Ananda Nambiar.
V. Veraswamy.
N. N. Govindaswami Kachiroyar.
L. Elayaperumal.
V. Muniswamy Avl. Thirukuralar.
A. Jayaraman.
P. T. Thanu Pillai.
A. V. Thomas.
M. Sankarapandian.
M. D. Ramaswami.
V. VR. N. AR. Nagappa Chettiar.
K. Kamaraj.
S. Balasubramaniam.
P. Kakkan.
K. Sakthivadivel Gounder.
Sm. Ammu Swaminathan.
U. Srinivasa Malliah.
B. Shiva Rao.
A. K. Gopalan.
Nettur P. Damodaran.
K. A. Damodara Menon.
B. Pocker.
K. Kelappan.
Eacharan Iyyani.

Orissa—20.

P. Subba Rao.
T. Sanganna.
Maharaja R. N. Singh Deo.
Giridhari Bhoi.
G. D. Thirani.
Dr. Natabar Pandey.
Sibnarayan Singh Mahapatra.
Sarangadhar Das.
Niranjan Jena.
B. Das.
Lakshmidhar Jena.
Ram Chandra Majhi.
Bhagabat Sahu.
Kanhu Charan Jena.
Nityanand Kanungo.
Harekrushna Mahatab.
Lokenath Misra.
Pandit Lingaraj Misra.
Umacharan Patnaik.
Bijoy Chandra Das.

Punjab—18.

Tek Chand.
Sm. Subhadra Joshi.
Virendra Kumar Satyawadi.
Ranbir Singh Chowdhury.
Ghamandi Lal Bansal.
Pandit Thakur Das Bhargava.
Lala Achint Ram.
Atma Singh Namdhari.
Sardar Lal Singh.
Bahadur Singh.
Sardar Baladev Singh.
Amarnath Vidyalankar.
Diwan Chand Sharma.
Ram Das.
Hem Raj.
Sardar Teja Singh Akarpuri.
Sardar Surajit Singh Majithia.
Gurmukh Singh Musafir.

Uttar Pradesh—86.

Mahavir Tayagi.
H. H. Rajmata Kamalendumati Shah.
Bhakt Darshan.
Devi Datta Pant.
C. D. Nande.
Satish Chandra.
Mukund Lal Agarwal.
Ram Saran.

M. Hifzur Rahman.
Maulana Abul Kalam Azad.
Nemi Saran Jain.
Ajit Prasad Jain.
Sunder Lall.
Hira Vallabh Tripathi.
Khushi Ram Sharma.
Pandit Krishna Chandra Sharma.
Shahnawaz Khan.
Raghubar Dayal Misra.
Kanhaiya Lal Balmiki.
Shri Chand Singhal.
Nardeo Snatak.
Seth Achal Singh.
Chowdhury Baghubir Singh.
Krishna Chandra.
Digambar Singh.
Rohanlal Chaturbedi.
Raghubir Sahai.
Chowdhury Badan Singh.
Mulchand Dube.
Badshah Gupta.
Hoti Lal Agarawal.
Lotan Ram.
Venkatesh Narayan Tiwary.
Pandit Balkrishna Sharma.
R. V. Dhulekar.
M. L. Dwivedi.
Shiva Dayal Upadhyay.
Piare Lall Kureel "Talib".
Vishwambhar Dayal Tripathi.
Swami Ramanand Shastri.
Col. B. H. Zaidi.
Bulaqi Ram Varma.
R. P. Nevatia.
Ganeshi Lal Choudhury.
Sm. Uma Nehru.
Choudhury Paragi Lal.
Mohanlal Saksena.
Sm. Ganga Devi.
Sm. Vijaya Lakshmi Pandit.
Feroze Gandhi.
Baij Nath Kureel.
Pandit Muniswar Dutt Upadhaya.
Dr. B. V. Keshkar.
Syed Mohammad Ahmad Kazmi.
Lallanji.
Panna Lal.
Birbal Singh.
Ganapati Ram.
Jawaharlal Nehru.
Masuriya Din.
Purushottamdas Tandon.
J. N. Wilson.
Rup Narain.
Raghunath Singh.
Tribhuban Narain Singh.
Rafi Ahmed Kidwai.
Sardar Jogendra Singh.
Chowdhury Hyder Husein.
Sm. Sakuntala Nayar.
Keshava Deva Malaviya.
Udai Shandar Dube.
Ram Shankar Lal.
Sohan Lal Dhusiya.
Hari Shankar Prasad.
Dasarath Prasad Dwivedi.
Sinhasan Singh.
Sarju Prasad Misra.
Bishwa Nath Ray.
Ramji Verma.
Sita Ram Asthana.
Viswanath Prasad.
Pandit Algu Rai Shastri.
Har Prasad Singh.
Ram Nagena Singh.
Murli Monohar.

West Bengal—34.

A. K. Basu.
Upendra Nath Barman.
Birendra Nath Katham.
Dr. Susilranjan Chatterjee.
Surendra Mohan Ghosh.
Anil Kumar Chanda.
Kamal Krishna Das.
Mahammad Khuda Buksh.
Tridib K. Chowdhury.
Jannath Kolay.
Dr. Pashupati Mandal.
Durga Charan Banerjee.
Bharat Lal Tudu.
Ninkunja Behari Chowdhury.
Satish Ch. Samanta.
Basanta Kumar Das.
Dr. Satyaban Ray.
Santosh Kumar Dutt.
Tushar Chatterjee.
N. C. Chatterjee.
Atulya Ghosh.
Mono Mohan Das.
Abdus Sattar.

Sm. Ila Palchaudhury.
Arun Chandra Guha.
Sm. Renu Chakravarty.
Patiram Ray.
Ramananda Das.
Kamal Kumar Basu.
Purnendu Sekhar Naskar.
Asim Krishna Dutt.
Sadhan Chandra Gupta.
Hirendra Nath Mukerjee.
Meghnad Saha.

Hyderabad—25.

Ahmed Mohiuddin.
Sadath Ali Khan.
K. Janardhan Reddy.
P. Ramaswamy.
Sivamurthi Swami.
Swami Ramananda Tirtha.
Krishnacharya Joshi.
Dr. Shaukatullah Shah Ansari.
Dr. S. A. Ebenezer.
Raghavendrarao S. Diwan.
R. G. Paranjpe.
Dr. Suresh Chandra.
Hanamantrao G. Vaishnav.
Narayan Rao Telkikar.
Dr. Devrao Namdevrao Pathrikar.
C. Madhao Reddi.
H. C. Heda.
Dr. N. M. Jaisoorya.
Baddam Yella Reddy.
M. R. Krishna.
Pendyal Raghava Rao.
T. B. Vital Rao.
Ravi Narayan Reddy.
Sunkam Achalu.

Mysore—12.

Dodda Thimmaiah.
M. V. Krishnappa.
C. R. Basappa.
N. Keshavaiengar.
T. Madiah Gowda.
M. K. Shivananjappa.
M. S. Gurupadaswamy.
N. Rachiah.
H. Siddananjappa.
K. G. Wodeyar.
S. Nijalingappa.
Tekur Subrahmanyam.

*Jammu and Kashmir—6

Maulana Md. Saeed Masuodi.
Lakshman Singh Charak.
Sofi Mohd. Akber.
Pandit Sheo Narayan Fotedar.
Muhammed Shaffee Choudhury.
Kh. Ghulam Qader.

Madhya Bharat—11.

Vaijnath Mahodaya.
Amar Singh Sabji Damar.
Nand Lal Joshi.
Radhelal Vyas.
Liladhar Joshi.
Bhagu Nandan Malvia.
Kailas Nath Katju.
Vishnu Ghanashyam Deshpande.
Dr. N. B. Khare.
Radha Charan Sharma.
Suriya Prasad.

Patiala and East Punjab States—5.

Hira Singh Chinaria.
Ranjit Singh.
Ram Pratap Garg.
Sardar Hukam Singh.
Ajit Singh.

Rajasthan—20.

Raj Bahadur.
Girraj Saran Singh.
Dr. Manick Chand Jatav-vir.
Shobha Ram.
Radheshyam Ramkumar Morarka.
Pannalal Barupal.
H. H. Maharaja Sri Karni Singhji Bahadur of Bikaner.
Jaswantaraj Mehta.
Bhawani Singh.

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*nominated by the President.

General Ajit Singhji.
G. D. Somani.
Nand Lal Sharma.
Daulat Mal Bhandari.
Hari Ram Nathany.
Balwant Sinha Mehta.
Bheekna Bhai.
Umashshanker Muljibhai Trivedi.
Raj Chandra Sen.
Nemi Chandra Kasliwal.

Saurastra—6.

Khandubhai Kasanji Desai.
Jethalal Harikrishna Joshi.
Dr. Jayantilal Narbheram Parekh.
Balvantray Gopaljee Mehta.
Chimanlal Chakubhai Shah.
Narendra P. Nathwani.

Travancore-Cochin—12.

A. Nesamony.
Kumari Annie Mascarene.
V. P. Nayar.
N. Sreekantan Nair.
R. Velayudhan.
P. T. Punnoose.
C. P. Matthen.
C. P. Mathew.
A. M. Thomas.
K. T. Achuthan.
C. R. Iyyuni.

Ajmer—2.

Jwala Prasad.
Pt. Mukat B. Lall Bhargava.

Bhopal—2.

Saidbullah Khan Razmi.
Pt. Chatur Narain Malavia.

Bilaspur—1.

Anandachand.

Coorg—1.

N. Somana.

Delhi—4

Sm. Sucheta Kripalani.
C. Krishnan Nair.
Naval Prabhaker.
Radha Raman.

Himachal Pradesh—3.

Rajkumari Amrita Kaur.
Gopi Ram.
A. R. Sewal.

Kutch—2.

Gulabshankar A. Dholakia.
Bhawanji A. Khimji.

Manipur—2.

Laisram Jogeswar Singh.
Rishang Keishing.

Tripura—2.

Dasaratha Deb.
Biren Dutt.

Vindhya Pradesh—6.

Bhagwandutt Shastri.
Randaman Singh.
Sardar Raj Bhanu Singh.
Tewari.
Shiva Dutt Upadhayaya.
Ram Sahai Tewari.
Motilal Malaviya.

*Andaman and Nicobar Islands—1.

Rt. Rev. John Richardson.

*Anglo-Indian—2.

Frank Anthony.
A. E. T. Barrow.

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*nominated by the President.

COUNCIL OF STATES

ANDHRA—12.

M. Basavapunnaiah.
K. M. Rahamath-Ullah.
K. Rama Rao.
Prof. G. Ranga.
S. Sambhu Prasad.
Alluri Satyanarayana Raju.
Puchalapalli Sundarayya.
K. Suryanarayana.
Pydah Venkata Narayana.

ASSAM—6.

Dr. S. K. Bhuyan.
Laksheswar Borooah.
Sm. Pushpalata Das.
Mahammad Roufique.
Maulana M. Tayyebulla.
R. Thanhlira.

BIHAR—21.

Ramgopal Agarwala.
Kazi Ahmad Hussain.
Sm. Angelina Tiga.
Jafar Imam.
Syed Mazhar Imam.
Khwaja Inait Ullah.
Kailash Behari Lall.
Narayan Mahtha.
Sm. Lakshmi N. Menon.
Dr. P. C. Mitra.
Kunwarani Vijaya Raje.
Kishori Ram.
Rameshwara Singh.
Braja Kishore P. Sinha.
Maheswar Prasad N. Sinha.
R. P. *alias* Balajee Sinha.
Rajesvar P. Narain Sinha.
Rama Bahadur Sinha.
Prof. R. D. Sinha Dinkar.
Tajamul Husain.
V. G. Gopal.

BOMBAY—17.

Abid Ali.
Sm. Violet Alva.
Dr. B. R. Ambedkar.
Somnath P. Dave.
T. R. Deogirikar.
Deokinandan Narayan.
Dr. N. S. Hardikar.
Lalchand H. Doshi.
Dr. M. D. D. Gilder.
Bhalchandra M. Gupte.
Shriyans Prasad Jain.
Premji Thobhanbhai Leuva.
Sm. Lilavati Munshi.
Chandulal P. Parikh.
D. Y. Pawar.
Rajaram Balkrishna Raut.
Manilal Chaturbhai Shah.

MADHYA PRADESH—12.

Dr. Waman S. Barlingay.
Bhanu Pratap Singh.
Ramrao Madhaorao Deshmukh.
Dr. R. P. Dube.
Pandit Sitacharan Dube.
M. R. Mujumdar.
Chandragopal G. Misra.
Gopaldas B. Mohta.
Prof. Dr. Raghu Vira.
Samiulla Khan.
Dr. Sm. Seeta Paramanand.
Rameshwar Umrao Agnibhoj.

MADRAS—18.

T. Vaskara Rao.
E. K. Imbichibava.
V. K. K. Menon.
S. Guruswami.
B. V. Kakkilaya.
T. V. Kamlaswamy.
Janab M. M. Ismail Saheb.
Sm. Mona Hensman.
K. L. Narasimham.
V. M. Obaidullah Saheb.
T. S. Pattabiraman.
G. Rajagopalan.
P. S. Rajagopal Naidu.
H. D. Rajah.
Dr. A. Ramaswami Mudaliar.
K. Sadanand Hegde.
V. M. Surendra Ram.
S. Venkataraman.

ORISSA—9.

Radhakrishna Biswasroy.
Jagannath Das.
Sm. Saila Bala Das.
Prafulla C. Bhanj Deo.
Bodh Ram Dube.
Surendranath Dwivedi.
Sundar Mohun Hemrom.
Surendra Mahanty.
Baidyanath Rath.

PUNJAB—8.

Dr. Anup Singh.
Diwan Chaman Lall.
Sardar D. S. Pheruman.
Guraj Singh Dhillon.
Sardar Swaran Singh.
Hans Raj.
M. H. S. Nihal Singh.
Jethedar Udam Singh Nagoke.

UTTAR PRADESH—31.

Ahmad Said Khan.
Akhtar Husain.
Amarnath Agarwal.
Amlakh Chand.
Brij Behari Sharma.
Sm. Chandravati Lakhanpal.
A. Dharam Das.
Gopinath Singh.
Har Prasad Saksena.
Hridoy N. Kunzru.
Indra Vidyavachaspati.
Jagannath Prasad Agarwal.
Jasaud Singh Bisht.
Jaspat Rai Kapoor.
Begam Aziz Rasul.
Lal Bahadur.
Moulana Mohammad Faruqi.
B. K. Mukherjee.
Dr. Murari Lal.
Narendra Deva.
Nawab Singh Chauhan.
R. C. Gupta.
Ram Kripal Singh.
Ram Prasad Tamta.
Sm. Savitri Devi Nigam.
Shyam Dhar Misra.
Pandit Shamsundar N. Tankha.
Dr. J. P. Srivastava.
Sumat Prasad.
Tarakeswar Pande.
Thakur Das.

WEST BENGAL—14.

Beni Prasad Agarwal.
Satyapriya Banerjee.
Indra Bhusan Beed.
C. C. Biswas.
Maya Devi Chettry.
Dr. Nalinaksha Dutt.
Rajpat Singh Doogar.
Bimal Kumar Ghose.
Devaprasad Ghose.
Bhupesh Gupta.
S. N. Majumdar.
Suresh Chandra Majumdar.
Syed Nausher Ali.
Satyendra Prasad Roy.

HYDERABAD—11.

S. Chinna Reddy.
Venkat Krishna Dhage.
Dr. Raj Bahadur Gour.
Dinshaw D. Italia.
Kishen Chand.
Kondu Narayanappa.
Narsingrao, B. Deshmukh.
Osman Sobhani.
Puranmal Surajmal Lahoti.
J. H. Subbiah.
B. V. Gurumurthy.

JAMMU AND KASHMIR—

Sardar Budh Singh.
Pir Mohammed Khan.
Pandit Anant Ram.
Aga Syed Mohd. Jalali.

MADHYA BHARAT—6.

Col. Sardar C. S. Rao Angre.
Kanhaiyalal Vaidya.
Krishnakant Vyas.
Dr. Raghubir Singh.
V. S. Sarwate.
Trimbak Damodar Pustake.

MYSORE—6.

B. P. Basappa Shetty.
M. Govinda Reddy.
S. V. Krishna Murthy Rao.
C. G. K. Reddy.
K. C. Reddy.
Mohamed Valiulla.

PATIALA AND EAST PUNJAB STATES UNION—3.

Jagannath Kaushal.
Lt.-Col. S. Joginder Singh Mann.

RAJASTHAN—9.

His Highness Rai-Rayan Maharawal, Sir Lakshman Singhji Bahadur of Dungarpur.
Swami Keshvanand Ji.
Ramnath Anandilal Podar.
Barkatullah Khan.
Dr. K. L. Shrimali.
Sardar Singh.
Sm. Sharda Bhargava.
Mahendra Singh Ranawat.
Harischandra Mathur.

SAURASHTRA—4.

Bhogilal Maganlal Shah.
Dr. D. H. Variava.
Jai Sukh Lal Hathi.
Nanabhai Kalidas Bhatt.

TRAVANCORE-COCHIN—6.

A. Abdul Razak.
S. Chattanatha Karayalar.
K. C. George.
K. P. Madhava Nair.
Mathai Manjuran.
C. Narayana Pillai.

AJMER AND COORG—1.

Moulana Abdul Shakoor.

BHOPAL—1.

Bheron Prasad.

BILASPUR & HIMACHAL PRADESH—1.

C. L. Varma.

DELHI—1.

Onkar Nath.

KUTCH—1.

Lavji Lakhamshi.

MANIPUR AND TRIPURA—1.

Munshi Arman Ali.

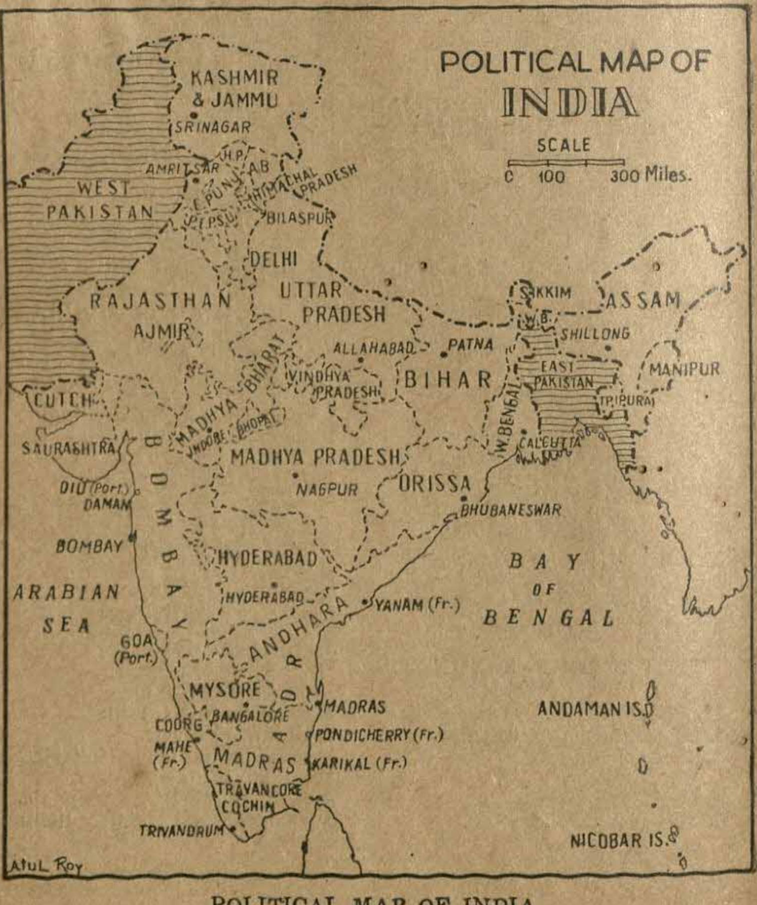
VINDHYA PRADESH—4.

Captain Awadhesh P. Singh.
Banarsi Das Chaturvedi.
Gulsher Ahmed.
Baij Nath Dube.

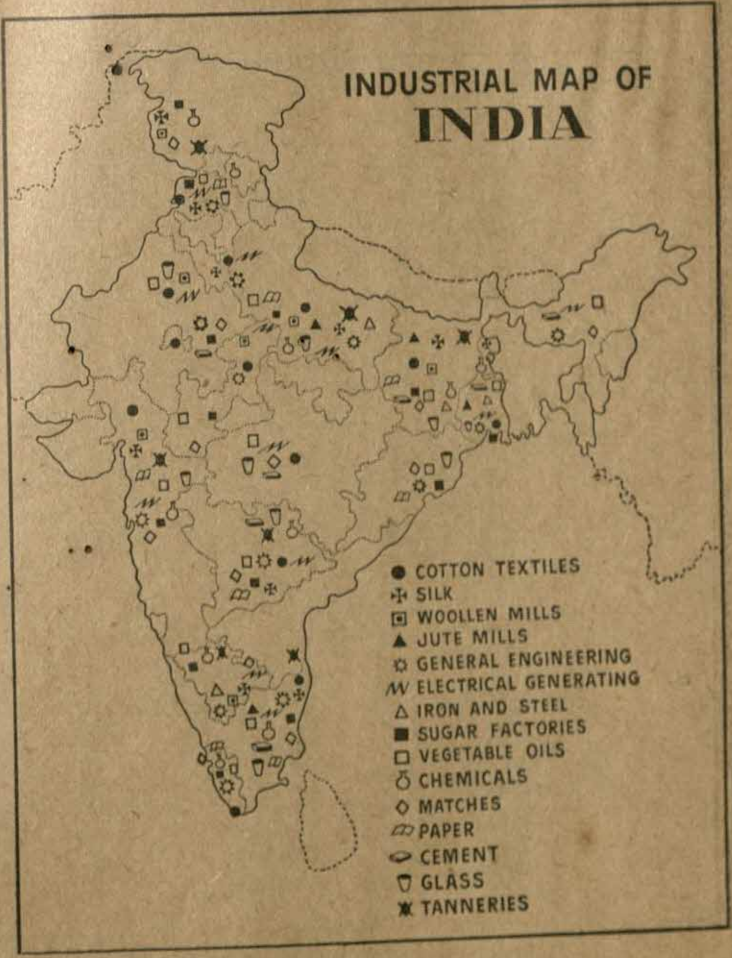
NOMINATED BY THE PRESIDENT—12.

Dr. Zakir Husain.
Dr. P. V. Kane.
Dr. Satyendra N. Bose.
J. M. Kumarappa.
Dr. Kalidas Nag.
Kakasaheb Kalelkar.
Maithilisharan Gupta.
Prithviraj Kapoor.
Dr. Radha Kumud Mukerji.
Dr. Sahib Singh Sokhey.
Sm. Rukmini Devi Arundale.
Naraindas Rattanmal Malkani.

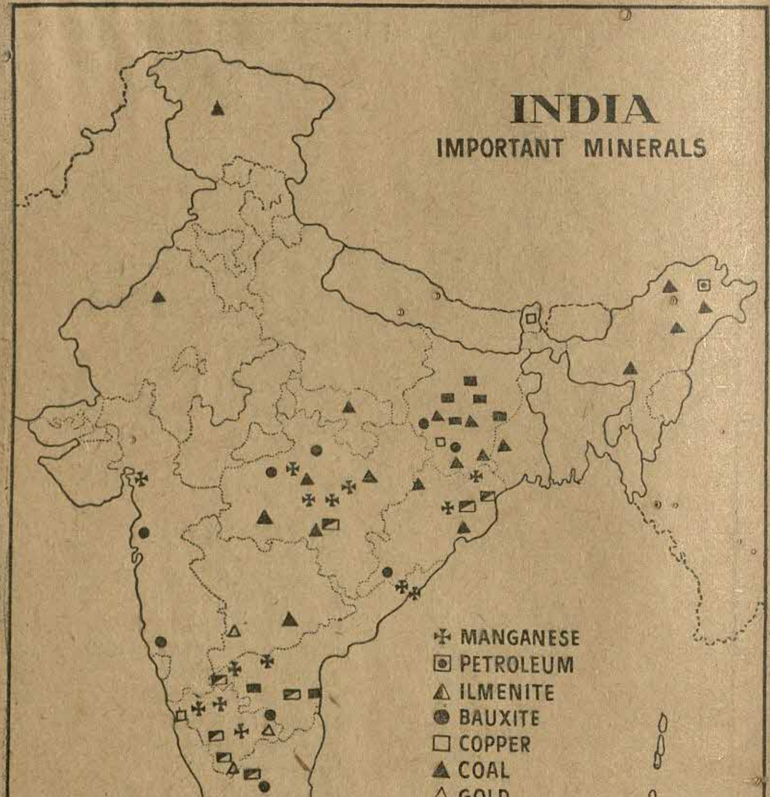
MAPS



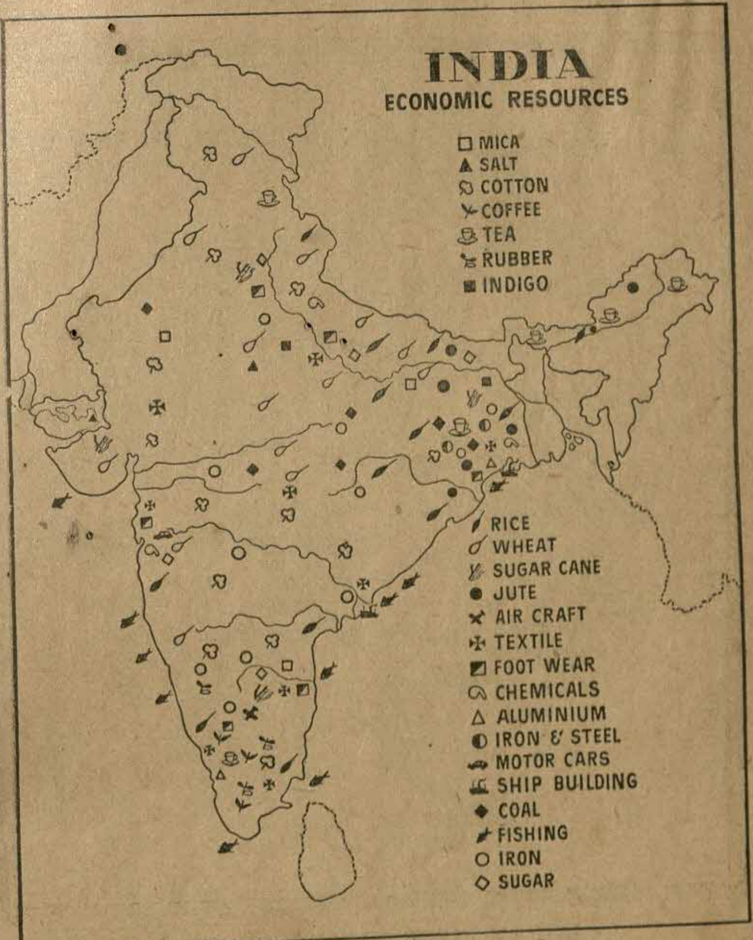
POLITICAL MAP OF INDIA



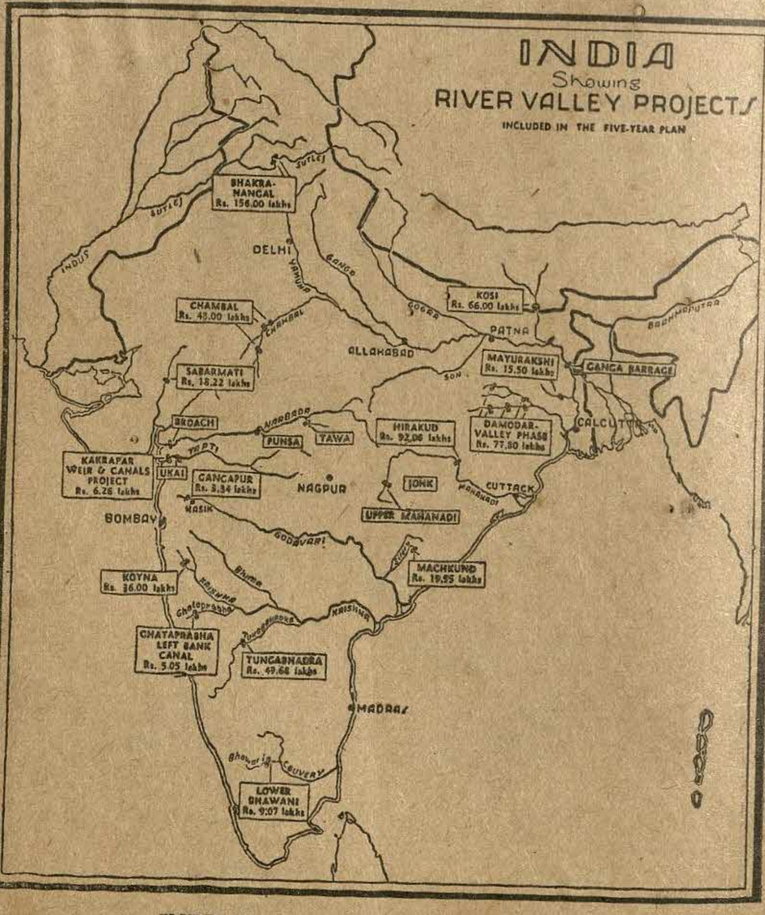
INDUSTRIAL MAP OF INDIA



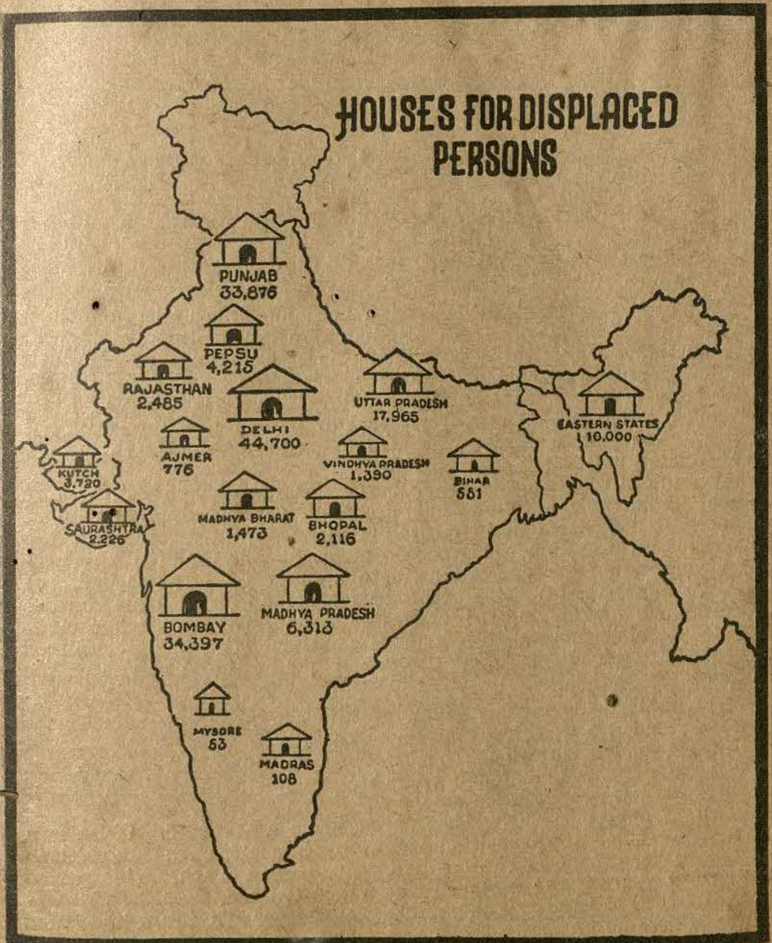
IMPORTANT MINERALS OF INDIA



ECONOCIC RESOURCES OF INDIA



INDIA'S RIVER VALLEY PROJECTS



HOUSES OF DISPLACED PERSONS IN INDIA

MISCELLANEOUS SECTION

THE YEAR'S MOST IMPORTANT LAW

The Estate Duty Act, 1953 providing for the imposition and collection in India of duty on the capital value of property changing hands on the death of a person, subject to an exemption limit, came into force on October 15, 1953.

Scope of measure—All properties, both movable and immovable, situated in the States of India are liable to duty. Immovable property outside the territories to which this Act applies are not dutiable, but foreign movable properties of a person domiciled in India at the time of his death attract the duty. The duty is payable on the capital value of all property, real or personal, suppled or not settled, which "passes" or is "deemed to pass" on the death of any person on or after October 15, 1953.

The inclusive definition of property has been given as (*a*) any interest in movable or immovable property, (*b*) proceeds of sale of the interest mentioned in (*a*), (*c*) any money or investment for the time-being representing the proceeds mentioned in (*b*), (*d*) any property converted from one species into another by any method, (*e*) equitable interests, (*f*) debts created by a person or with his consent enforceable against him, (*g*) choses in action, (*h*) any other right capable of being reduced to a money value and (*i*) benefit conferred by the extinguishment of a debt or right at the expense of the deceased.

Not liable to duty—The following kinds of property do not pass on death, and are therefore not liable to duty:

(*a*) Property in which the deceased or any other person had an interest only as holder of an office or recipient of the benefits of a charity or as a corporation sole.

(*b*) Property held by the deceased as a trustee. If he is a co-trustee under a disposition made by himself, such disposition must have been made more than two years before death. This period will be five years if the deceased was a sole trustee.

(*c*) Settled property in which the deceased's interest failed before it became an interest in possession.

(*d*) Property settled on the deceased for life and which reverts on his death to the settler.

(*e*) Life interest taken by a surviving husband or wife in the income of property originally settled by such survivor on or before the coming into force of the Act.

(*f*) Property passing by reason only of a bonafide purchase for full consideration in money or money worth.

Absolute gifts made without any reservation are not dutiable unless made within the statutory period of six months in the case of public charitable purposes or of two years in the case of other gifts as the case may be. The conditions are—(a) the donee must take immediate possession (b) the donor must be excluded from possession (c) the donor must not retain any benefit either by contract or otherwise and (d) there must be no reservation or any secret arrangement.

Correct valuation—The principal value of any property has been defined in the Act as the price which, in the opinion of the Controller, it would fetch if sold in the open market at the time of the death of the deceased. The market price means the best price which can be obtained. But due consideration has to be taken to the fact where it proved that the property has depreciated by reason of the death of the deceased.

Exemption from duty—(*a*) gifts for public charitable purposes made within six months of death to the extent of Rs. 2,500 (*b*) gifts for any other purpose within two years of death to the extent of Rs. 1,500. (*c*) proceeds of insurance policy for the purpose of paying Estate Duty and assigned to Government to the extent of duty payable but not exceeding Rs. 50,000. (*d*) moneys deposited with the Government for the purpose of paying Estate Duty to the extent of duty payable but not exceeding Rs. 50,000 (*e*) Insurance proceeds on the life of the deceased to the extent of Rs. 5,000 (*f*) moneys earmarked under a insurance policy or under a declaration of trusts or settlement for the marriage of any of the female relatives dependent on the deceased for necessaries of life to the extent of Rs. 5,000 for each of such relatives (*g*) all deaths occuring within a period of three months of the 1st death in respect of which duty been paid will be treated as one death (*h*) Relief is also provided for the Hindu Widow's limited interests if she dies within seven years of her husband's death, (*i*) court fees paid in any of the States of India for obtaining probate, letters of administration or succession certificates is an allowable deduction from the Estate Duty.

RATES OF ESTATE DUTY

Part I

In th case of property which consists of an interest in joint family property of a Hindu family governed by the Mitakshara, Marumakkattayam or Aliyasantana law—

		Rates of duty
(1)	On the 1st Rs. 50,000 of the principal value of the State	Nil
(2)	On the next Rs. 50,000	5 p.c.
(3)	On the next Rs. 50,000	7½ p.c.
(4)	On the next Rs. 50,000	10 p.c.
(5)	On the next Rs. 1,00,000	12½ p.c.
(6)	On the next Rs. 2,00,000	15 p.c.

(7) On the next Rs. 5,00,000 .. .. .. 20 p.c.
(8) On the next Rs. 10,00,000 .. .. .. 25 p.c.
(9) On the next Rs. 10,00,000 .. .. .. 30 p.c.
(10) On the next Rs. 20,00,000 .. .. .. 35 p.c.
(11) On the balance of the principal value of the estate 40 p.c.

Part II

In the case of property of any other kind :—

(1) On the first Rs. 1,00,000
(2) On the next Rs. 50,000 .. .. .. 7½ p.c.
(3) On the next Rs. 50,000 .. .. .. 10 p.c.
(4) On the next Rs. 1,00,000 .. .. .. 12½ p.c.
(5) On the next Rs. 2,00,000 .. .. .. 15 p.c.
(6) On the next Rs. 5,00,000 .. .. .. 20 p.c.
(7) On the next Rs. 10,00,000 .. .. .. 25 p.c.
(8) On the next Rs. 10,00,000 .. .. .. 30 p.c.
(9) On the next Rs. 20,00,000 .. .. .. 35 p.c.
(10) On the balance of the principal value of the estate 40 p.c.

Part III

In case of shares held by a deceased member in any such company as is referred to in sub-section (1) of section 84

(1) If the principal value of the shares does not exceed Rs. 5,000 .. .. Nil
(2) If the principal value of the shares exceeds Rs. 5,000 .. .. 7½ p.c.

INDIA AND THE WORLD

	India	*World*
Population (in crores)	36	240
Land area (in crores of acres)	81	3,251
Area per capita (in cents)		
All Land	225	1,354
Agricultural area	97	351
Arable land	97	126

EVEREST STORY

Over a century after it had beed discovered to be the world's highest mountain, the summit of Mount Everest in 1852, was finally reached at 11·30 a.m. on Friday, May 29, 1953. Thus ended the world's greatest advanture, on which had cost 22 lives. The expedition consisted of 12 Englishmen, New Zealanders Edmund Hillary and Lowe and 34 Sherpas including the 39-year-old intripid climber Tenzing Norkay. Base camp was established in the Kumbo glacier at 17,600 feet, camp IV in the western CWM at 21,200 ft. and camp VIII on the Southern Col at 25,800 ft. Nine members including the leader of the expedition Col. John Hunt and 19 Sherpas attained